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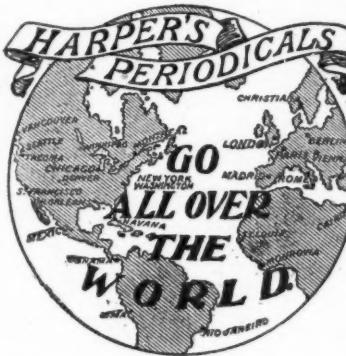
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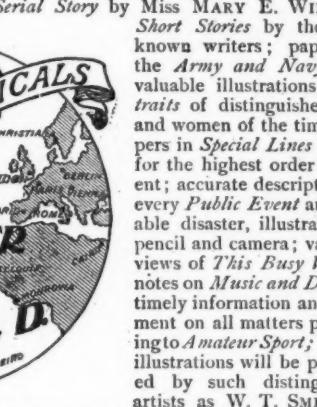
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Fifth Series, }
Volume LXXXIV. }

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Vol. CCXIX.

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POETRY.		
AT A DANCE,	450	TO PEGGY ON THE LAWN,
A SONG OF SUNLIGHT,	450	IN THE VALLEY,

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AT A DANCE.

My queen is tired and craves surcease
Of twanging string and clamorous brass ;
I lean against the mantlepiece,
And watch her in the glass.

One whom I see not where I stand
Fans her and talks in whispers low ;
Her loose locks flutter as his hand
Moves lightly to and fro.

He begs a flower ; her finger-tips
Stray round a rose half veiled in lace ;
She grants the boon with smiling lips,
Her clear eyes read his face.

I cannot look, my sight grows dim —
While Fate allots unequally,
The living woman's self to him,
The mirrored form to me.

AUGUSTA DE GRUCHY.

A SONG OF SUNLIGHT.

LIFE and death, and the power of love, and
the strength of laughter ;
Music of battle, and ships that sail away
to the west ;
All that hath gone before and all that fol-
loweth after ;
The mad, blind struggle for gold, and the
restless seeking for rest, —
The brain reels round with them all, and
weariness is their name ;
Come to the long, low moorland and
hear, ere the winter win it, —
Where the broom like a sunlit beacon
flashes in golden flame, —
The music of wind and water, of the bee
and the mountain linnet.

Blue is the sky overhead and purple the
heather about us,
Far on the dim horizon the white sails
gleam in the haze,
One is the dream within and the song that
is ours without us,
The joy of the sunsteeped present, struck
free from the whirl of the days.
Hark ! how she sings in the fern, a pas-
sionate song of content,
The wren, now hanging a moment where
the fox-glove's bells are shaken,
Now by the water's edge the iris bowed as
she went,
Weaving her melody out of the sweets by
the way she has taken.

Sing, little bird in the willows, low by the
edge of the river,

A song that ripples and leaps as the
waters leap in a spring ;
The wind breathes low in the grass where
the threads of the gossamer quiver,
And all the sunlit moorland is silent to
hear you sing.

Sing that life is glad, and fair are the land
and the sea,

The wonder of stars in the night, and
the noontide's golden glory,

Ours is the joy of the present, we care not
what is to be,
And the past is dim as a dream, or a
half-remembered story.

DUNCAN J. ROBERTSON.

Longman's Magazine.

TO PEGGY ON THE LAWN.

SHE is dressed, like the early Springs,
In the daintiest pink and white ;
From her mischievous hand she flings
Pink-petaled lawn-daisies, the spright !

The daisies are spells, and after
She's cast them and knows that I'm
bound,
The ring of her delicate laughter
Breaks into bright ripples of sound.

So now I'm her poor captive knight,
Unable to cope with her art ;
Henceforth, with her baby-feet light,
She will walk rough-shod o'er my heart.
Spectator. E. M. R.

IN THE VALLEY.

MYRIAD birds in the thicket sing,
Glancing and flitting on eager wing ;
Leaves are green on the branches still,
But the autumn airs breathe chill.

Spring is over and Summer gone,
But the birds in the valley still sing on
To the broad brown hills and the quiet
sky,
Though Winter is drawing nigh.

The slow wind sighs and the skies are
grey,
But the little birds pipe so shrill, so gay ;
So sweet to-day are the songs they sing
They will waken the banished Spring.

GRAHAM R. TOMSON.
National Observer.

From The National Review.
BIOGRAPHY.

THE most amusing book in the language is "The Dictionary of National Biography." If any one doubts what appears to me to be a self-evident proposition, he has only to buy the work and to dip into it at odd moments. He must be hard to please if he is not interested in a collection of all that is known about our countrymen of all ages, including the dim personages who "flourished" in an uncertain century and the last M or N whose obituary notice is in last year's newspapers. Many volumes full of interesting anecdotes, every word of which is true, must surely fascinate every intelligent reader. As I had the fortune to be closely connected with this undertaking for some years, and was bound therefore to read every article, I ought to speak with some authority, as I can now speak with impartiality. An excellent friend of mine, who inferred that I must be overflowing with the knowledge so imbibed, asked me the other day whether I had not become a profound psychologist. Possibly I ought to have acquired what is called "a knowledge of the human heart." But, in the first place, I find that I forget all about the A's before I have got well into the C's. In the next place, the chief part of an editor's duties consists in acting as Dryasdust. Questions as to whether a date is given in the old style or the new, or as to whether two different titles refer to the same book or to two different books, or to two different modifications of the same book, cannot be said to throw much light upon problems of psychology. And, finally, to say nothing else, one has to study not life at first hand, but what has been said about lives by biographers, which is a very different thing. A study of biographies by the dozen, though it often leaves one pretty much in the dark as to the people biographized, ought perhaps to give one some views as to the art of biography. It is difficult, indeed, to say much that is true and that is not perfectly obvious about any art whatever, and I feel that

the few remarks which my experience has taught me will be neither original nor profound.

Biography in the dictionary form has certain peculiarities of its own. The dictionary-maker stands in awe of Dryasdust. He must try to satisfy the genealogist and the bibliographer. He must, therefore, give a number of details which often have little bearing upon the life of his hero. It is impossible to say what minute fact may not have some incidental interest for the historian, and a good deal of dry information must be recorded which the reader for amusement must be trusted to skip. Still more has the dictionary-maker to trust to the reader to supply the flesh and blood to his dry bones. He must restrain his rhetoric and sentiment and philosophical reflection within the narrowest bounds. Our critics—it is the only fault I can find with them—sometimes do us too much honor by comparing us with literature of a more ambitious class. They take the show-lives—the Shakespeare or William the Conqueror—and ask whether they have been adequately written, and whether the writers show a sound judgment in their literary or historical theories. Now, we cannot afford to expatiate about Shakespeare; we have to make room for the less conspicuous people, about whom it is hard to get information elsewhere. The real test of the value of the book is in the adequacy of these timid and third-rate lives. Nor, again, will a reader of sense look to a dictionary to tell him (if he wants to be told) what he ought to think of Shakespeare's plays, or of William's position in the world's history. There are plenty of philosophers who will gladly supply him with ideas on those subjects. The dictionary-maker can at most give a brief indication of the opinions held by good authorities and a reference to the books where they are discussed; and, possibly, may intimate summarily his own conclusions. But to discuss or expound those conclusions at length is impossible, and the critic, if he chooses to take the article as a peg on which to

hang his own theories, must not complain if it pretends to be no more than a peg.

I have given these hints because they may indicate the true nature of the problem to be solved. The dictionary-maker writes under the strictest limitations. But art, as is often observed, may show itself best under such limitations. The writer of a sonnet, if the comparison be not too ambitious, knows that his success is due to the difficulties which he has surmounted. His gems are imperishable if he has fitted his thought precisely to the prescribed form. Now, the writer of an ideal dictionary life would achieve a somewhat similar task. He would manage to say everything while apparently saying nothing ; to give all the facts demanded from him ; to give nothing but the facts ; and yet to make the facts tell their own story. If he is not allowed to comment or to criticise, he may put the narrative so that the comment or criticism is tacitly insinuated into the mind of his reader. By skilful arrangement of his story by condensation of the less important parts, by laying due stress on the most essential, he should set the little drama of a human life in the right point of view and reveal its most important aspects. A smart journalist knows how to beat out a single remark into a column of epigrams and illustrations. The dictionary-maker should aim at the reverse process, he should coax the column of smoke back into the original vase ; he should give the very pith and essence of the case, and, like the skilful advocate, appear to be simply relating a plain narrative, when he is really dictating the verdict. "Thou hast convinced me," as Rasselas says, that nobody can write such an article. That is perfectly true ; but to produce such an article may be the dream of the writer, however conscious he may be that ideals are rarely attainable in this world.

I say this from the dictionary-maker's point of view ; but it applies to biographers in general, and now more than ever. The modern biographer is not

content to be silent when there is nothing to be said. If facts are wanting, he fills up the gap with might-have-beens. He tells us that when Robinson was born Brown was on his death-bed and Jones prime minister, and speculates upon what would have happened if they had all been contemporaries. When the poor dictionary-maker has to say briefly, is, "John Smith was educated at the grammar-school of his native town" the writer of a graphic biography talks of the Renaissance and the early system of scholastic training, and Dr. Busby and corporal punishment, and the influence of classical culture upon the human mind in general as well as upon Smith in particular. The dictionary-maker must trust that his reader will see all this between the lines ; take the philosophy and the pathos for granted, and make his own picture of the small Shakespeare creeping like a snail to the Stratford school, instead of repeating the well-known paragraph which begins, "The imagination loves to dwell." When I have had to read some of these exuberant biographies I have wished that I could have had the writer under my charge for a time. Firmly, if benevolently, I would have drilled him ; cut out all his fine things, condensed his sentiment by a little cold water, and squeezed his half-dozen pages into half a column. I have tried the experiment, and it should be recorded, for the credit of human nature, that a writer was once good enough to express a gratitude for my surgery. Others mildly remonstrated ; yet surely, if I did not use the knife very clumsily, the discipline was a good one. In these days, when we have decided, as it seems, that nothing is to be forgotten, two things are rapidly becoming essential—some literary condensing machine, and a system of indexing. Our knowledge, that is, requires to be concentrated and to be arranged. When I have been in the library of the British Museum I have been struck with a not wholly pleasing awe. I went one day to the manuscript-room, and there was invited to regale myself

with three thick volumes of closely written letters by the London agent of certain foreign booksellers, filled, in an illegible hand, with the smallest literary gossip of the days of George II. I extracted from it, after much pains, the name of the university at which Des Maiseaux had taken his degree, for which I hope my readers will be thankful. I went to the reading-room, and discovered there a college exercise printed in the seventeenth century at Leydon, which enabled me to reveal to an inquisitive world the name of Bernard Mandeville's father. It is bewildering to think that a lad cannot print a declamation in Holland without the thing being preserved for the benefit of Englishmen two centuries later. The mass of matter preserved on the shelves of that invaluable Museum is the externalized memory of the race. There is nothing too petty or contemptible to be preserved. When one thinks of all the records preserved up and down Europe in the archives of various States, of all the materials in private hands, of the infinitesimal portion which any reader could get through in a lifetime, and then of the enormously accelerated rate at which information is now being compiled and amassed in safe repositories, one stands aghast. If a fire should take place at the Record Office or the British Museum I would give all the strength I possess to working the engines. But if fire were a discreet element, which could be trusted to burn only the rubbish, I could find it in my heart to applaud a conflagration.

This is a digression ; but it gives the reflection which is constantly before the dictionary-maker. He is a toiler among those gigantic piles of "shot rubbish" of which Carlyle complained so bitterly when he too was a slave of Dryasdust. He is trying to bring into some sort of order, alphabetical at least, the chaos of materials which is already so vast and so rapidly accumulating. To write a life is to collect the particular heap of rubbish in which his material is contained, to sift the relevant from the superincumbent mass,

and then try to smelt it and cast it into its natural mould. His first operation is, of course, to take the lives already written, and to boil them down into the necessary limits. Many lives must contain as much history as biography, and of the historical aspects I do not propose to speak. The life with which I am concerned is the record of what happened to a single human being between his birth and his death ; and the purpose of the narrator is to show what he was and how he came to be what he was. It is only in a few cases that these questions can be said to have been adequately treated. The most really interesting problem — that of the development of the human character — is generally the most inscrutable. If, as has been frequently said, any man even the most commonplace, could be adequately explained ; if we could be told with what qualities he started, and what influences really moulded and developed them, we should have a book of unsurpassable interest. But it is rare to find any approach to such an account. Few facts are preserved till a man has become well known, and by that time his character is generally formed. Nothing is more striking to the biographer than the rapidity with which all possibility of satisfactory portraiture vanishes. Nobody, as Johnson somewhere says, could write a satisfactory life of a man who had not lived in habits of intimacy with him. Now, it is rare for a man to preserve the intimates of his early years ; school friendships are transitory, and schoolboys are not generally keen psychologists. All they can generally remember is the best score made in a cricket-match or the prize at an examination. They generally see nothing of their schoolfellow's real life, and they are divided between the wish to show that they recognized genius early, and the pleasure of supporting the paradox that the genius was originally stupid. If the father or mother or schoolmaster survive, the schoolmaster has an eye to the merits of his school ; the father probably thought more of the school-bills than of the boy's work ; and the

mother—was a mother. The friends who survive are generally those who have been attracted in later years ; and even if they are keen of penetration and of power of telling what they have perceived—both rare qualities and frequently disjoined—they only tell us of the finished product. The few biographies which give a really instructive account of mental and moral growth are autobiographies. After making obvious allowances, they are always instructive, and they generally dwell with natural fondness upon the early years, in which the critical process was undergone. Without such a narrative or letters or diaries which are in some respects a better, because a more unconscious and less modified, autobiography, the life of a famous man is often an insoluble problem even at his death. I could mention men whom I have known, who were known to very wide circles, and who were survived by many contemporaries, whose early history, except so far as the bare external facts are concerned, must remain purely conjectural, simply because no competent witness has survived them. Those who were in a position to know were unobservant, or stupid, or dull, or forgetful.

We can now generally ascertain—it is a rather melancholy reflection—all the external facts ; but whatever cannot be inferred from them vanishes “like the smoke of the guns on a wind-swept hill !” School registers and the like will supply us with an ample framework of dates ; but the history of the mind and character evaporates, and is vaguely supplied by conjecture. Do we even remember our own history, or did we even know at the time what was really happening to us ? Some people with powerful memories seem to preserve a detailed map of the past ; but in my own case, which is, I suspect, the commonest, I should be reduced to mere guessing as to my motives and the influences which affected me almost as much as though I were writing of a stranger. And yet, with all such necessary imperfections, biographies have a fascination, even

when they are of the scantiest. They stimulate the imagination to realize one of the hardest of all truths to accept—that the existence of a “Hamlet” now proves that there must actually have once been a William Shakespeare. The lives written in that period, indeed, seem to leave the case almost doubtful. They are so vague, perfunctory, and unsubstantial, that we are half inclined to regard the heroes as mere phantoms, vague X’s and Y’s who never trod the solid earth. The actors upon the great stage of politics here, of course, come down to us with sufficient vividness. A man who has cut off other men’s heads, or had his own cut off, has impressed his reality upon the world ; but the mere author, philosopher, or poet, has vanished, like Aubrey’s famous spirit, leaving nothing behind but a “twang” and a sweet, or perhaps not sweet, savor. The biographers at most were content to amplify the conventional epitaph ; or at times, like the excellent Izaak Walton, they wrote most charming little idylls, beautiful to read, but curiously empty of facts, and tinged with a rose-color calculated to rouse suspicions. For some biographies the main authority is a funeral sermon ; and the typical funeral sermon is one which an eloquent divine constructed out of an elaborate parallel between the characters of King David and George II. If we had only known of George the points in which he resembled the Hebrew monarch, our information would obviously have been defective. A writer to whom all readers of seventeenth-century biography often owe their fullest knowledge is Anthony à Wood, one of the most thorough and satisfactory of antiquaries. His inestimable collection is charming not only from its good workmanship within its own limits, but also for the delightful growls of disgust extracted from the old High Church don at every mention of a Nonconformist or a Whig—especially if the wretch claims to possess any virtues. But Wood can only give, and only professes to give, data for lives, not the finished product. As

time goes on we get the biography which serves as a preface to collective works. The author is haunted by the modest conviction that his readers are anxious to get at the author's own writings, and is content with pronouncing a graceful *éloge*, without desiling his elegant phrases by the earthly material of facts. Toland wrote a life of Milton, when a dozen people were extant who could have described for him the domestic life of his hero. He felt, however, that to go into such details would compromise his dignity, and leave no room for his judicious observations upon epic poetry. Of Toland himself we are told by a biographer that he was forced to leave the court at Berlin "by an incident too ludicrous to mention." We vainly feel that we would give more for that incident than for all the other facts mentioned. This dignified style survived till the end of the last century, and we have a grudge against Dugald Stewart, otherwise an excellent person, for writing a life of Adam Smith in the spirit of a continuous rebuff to impertinent curiosity. The main purpose of such biographies seems to be to prevent posterity from knowing anything about a man which they could not discover from other sources. There is a biography famous for not giving a single date, and an autobiography in which the hero apologizes for once using the word "I." The biographer of modern times may be often indiscreet in his revelations; but so far as the interest of the book goes the opposite pole is certainly the most repulsive. We want the man in his ordinary dress, if not stripped naked; and these dignified persons will only show him in a full-bottomed wig and a professor's robes. Johnson changed all this as author and subject of biography.

In the "Lives of the Poets," we have at least a terse record of the essential facts seen through a medium of shrewd masculine observation. The writer is really interested in life, not simply recording dates or taking a text for exhibiting his own skill in perorating. He is investigating character,

and, with obvious limitations, investigating it with remarkable insight. Of the immortal Boswell, it is happily needless to speak. Since his book, no writer has been at a loss for a model; and many most delightful books are its descendants, though none has eclipsed its ancestor. Boswell founded biography in England as much as Gibbon founded history and Adam Smith political economy. He produces that effect of which Carlyle often made such powerful use, the sudden thrill which comes to us when we find ourselves in direct communication with human feeling in the arid wastes of conventional history; when we perceive that a real voice is speaking out of "the dark backward and abysm" of the past, and a little island of light, with moving and feeling figures, still standing out amidst the gathering shades of oblivion. Perhaps there are no books in which the imagination is so often stimulated in that way as in Carlyle's own "Cromwell" and Spedding's "Bacon." The "Bacon" is to me a singularly attractive book, to which, indeed, the only objection is that it is not properly a book, but a collection of documents. It is therefore the mass of raw material from which I hope that a book may some day be constructed. Such a book might be a masterpiece of applied psychology. It would give the portrait of a man of marvellous and most versatile intellect, full of the noblest ambitions and the most extensive sympathies, combined with all the weaknesses which we are accustomed to class as "human nature." Spedding's hero-worship led him to apologize for all Bacon's errors; and, though the very ingenuity of the pretexts is characteristic both of the hero and his biographer, we are sensible that a more disengaged attitude would have enabled Spedding to produce a more genuine portrait. He has provoked later writers to air their virtuous indignation a little too freely. We want the writer capable of developing the character in the Shakespearian spirit; showing the facts with absolute impartiality, not displaying his moral sense, if that be

really the way to display a moral sense, by blackening the devil and whitening the angel. We should then have a pendant to Hamlet with the advantage of reality ; the true state of a man of the highest genius, but without enough moral ballast for his vast spread of intellectual sail.

This case represents the great crux of the biographer. Is he to give a pure narrative of his own, or to let his hero talk to us face to face ? In some cases the raw material is better than any comment. No biographer could supersede the necessity of reading Pepys's own diary. The effect is only producible by following Pepys to his own closet and overhearing all his most intimate confessions to himself. Indeed, if we had time, we should generally get a far more perfect picture by studying all a man's papers than by reading his life. But that means that we are to cook our own dinners and write the life for ourselves. I say nothing of the vast rubbish heaps which would have to be sifted. Many such collections, again, Walpole's letters, for example, are really interesting for the side lights thrown upon other persons or the general illustrations of the period ; and a life which only showed us Walpole himself would miss the interest of all that Walpole saw. Everything must, of course, depend on the particular circumstances, the nature of the hero's career, and of the materials which he has left. The life proper, however, is that in which the main interest is the development of the man's own character and fortunes. Now, as a fairly working principle, I should say that the main purpose of the writer should be the construction of an autobiography. Boswell's felicity in being able to make Johnson talk to us is, of course, almost unique. Only the rarest combination of circumstances can produce anything approaching to such material. But the next best thing is the autobiography contained in letters. The question of whether a really satisfactory life can be written is essentially the question of whether letters have been preserved. It is a general

belief that the art of letter-writing has been killed by the penny post. Your correspondent, you know, will pick up all the gossip from the papers, and a Horace Walpole is therefore an anachronism. Cowper's delightful letters, again, pre-suppose an amount of leisure, a power of sitting down quietly to compose playful nothings for a friend, which has now almost vanished. Your author can put his good things, if he has any, to better account. But the general statement is, I think, disputable. The letters of the day must always appear to be bad, simply because few are yet published. Our grandsons will first be in a position to judge of us. Many of the best letters of the last generation were written by busy men, already exposed to many of our difficulties, and yet were, I think, equal to any of the past. I do not know a much pleasanter course of reading than is to be found in the letters of Scott, Southey, Byron, Macaulay, and Carlyle, to mention no others. The very fact that we have not to act as newswriters often gives us a better opportunity of expressing our feelings about the events of the day. We may take for granted that our correspondent has read the debates, and may confine ourselves to blessing or cursing Mr. Gladstone or Mr. Balfour. One can hardly bless or curse without displaying one's own nature. While letters become less important as records of events, they preserve their full significance as revelations of character ; and that is what the biographer chiefly requires. It should therefore be regarded as a duty (it is one which I systematically transgress) to keep all letters written by a possible biographee ; and I think that we shall be surprised, not that they have so little merit, but rather that the amount of passion and feeling with which they are throbbing has allowed them to lie quiet in their dusty receptacles.

Be this as it may, letters in the main are the one essential to a thoroughly satisfactory life. From them, in nine cases out of ten, is to be drawn all that gives it real vividness of coloring.

Everybody knows the strange sensation of turning over an old bundle of letters, written in the distant days when you were at college, or falling in love. Your memory has ever since been letting facts drop, and remoulding others, and coloring the whole with a strangely delusive mist. You have unconsciously given yourself credit for deliberately intending what came about by mere accident ; and, in giving up youthful opinions, have come to forget that you ever held them. I found out once from an old letter that I had taken a decision, of great importance for me, upon grounds which I had utterly forgotten, and of which I had unconsciously devised a totally different (and very creditable) account. I burnt the letter and forgot its contents, and I now only know that my own story of my own life is somehow altogether wrong. A writer of an interesting autobiography tells us how he refused a certain office from a chivalrous motive ; and then adds, with charming candor, that, though he has always told the story in this way, he has found from a contemporary letter that one of his motives was certain natural but not chivalrous fears as to his own health. His memory had kept only the agreeable recollection. Such incidents represent the ease with which the common legend of a life grows up ; and the sole corrective for good or for bad is the contemporary document. To know what a man said at the moment is of primary importance, even if he was lying or acting a part. The letter which shows what a man wished to appear generally tells a good deal as to what he was. Even if we take a hero in active life, one of Nelson's letters or phrases shows more of the man than the clearest narrative of the battle of Trafalgar. His signals enlighten us as much as they appealed to his crews, and show what lay behind the skilful tactics and the heroic daring. A biographer has, of course, to lay down his framework, to settle all the dates and the skeleton of facts ; but to breathe real life into it he must put us into direct communication with the man

himself ; not tell us simply where he was or what he was seen to do, but put him at one end of a literary telephone and the reader at the other. The author should, as often as possible, be merely the conducting wire. Some biographies are partly intended to show the merits of the biographer ; but even the most undeniable hero-worship is often self-defeating. The writer shows his zeal for a friend's memory by treating him as the antiquaries treat Shakespeare. It is pardonable, in our dearth of information about Shakespeare, that, no real biography being possible, we should hunt up all the trivial details which are still accessible. We cannot know what he thought of his wife or his tragedies, or what realities, if any realities, are indicated by the sonnets ; and we may therefore be thankful for a beggarly account of facts from a few legal documents and registers. But when a man's memory is still fresh and vivid, when the really essential documents are at hand, biographers display their zeal too often by preserving what would be useful only in the absence of the genuine article. There is some interest now in reading Goldsmith's tailors' bills and noting the famous bloom-colored garment ; but a biographer need not infer that the tailors' bills of his own hero should also be published at length. We have to learn the art of forgetting — of suppressing all the multitudinous details which threaten to overburthen the human memory. Our aim should be to present the human soul, not all its irrelevant bodily trappings. The last new terror of life is the habit of "reminiscing." A gentleman will write a page to tell us that he once saw Carlyle get into an omnibus ; and the conscientious biographer of the future will think it a duty to add this fact to his exhaustive museum.

The ideal biographer should in the first place write of some one who is thoroughly sympathetic to him. Excessive admiration, though a fault, is a fault on the right side. As Arbuthnot observes in the recipe for an epic poem, the fire is apt to cool down won-

derfully when it is spread on paper. Readers will make deductions enough in any case ; and nothing can compensate for a want of enthusiasm about your subject. He should then consider how much space his hero undeniably deserves, divide that by two (to make a modest denominator), and let nothing in the world tempt him to exceed the narrower limits. Sam Weller's definition of good letter-writing applies equally to biography. The reader should ask for more and should not get it. The scrapings and remnants of a man's life should be charitably left to the harmless race of bookmakers, as we give our crumbs to the sparrows in winter. If there are any incidental facts with which the hero is connected, but which have no bearing upon his character, consign them to an appendix or put them into notes. I have myself a prejudice against notes, and think that a biography should be as independent of such appendages as a new poem. But there are people, perhaps of better taste than mine, who like such trimmings, and have a fancy for trifling with them in the intervals of reading. The book itself should, I hold, be a portrait in which not a single touch should be admitted which is not relevant to the purpose of producing a speaking likeness. The biographer should sternly confine himself to his functions as introducer ; and should give no more discussion than is clearly necessary for making the book an independent whole. A little analysis of motive may be necessary here and there ; when, for example, your hero has put his hand in somebody's pocket and you have to demonstrate that his conduct was due to sheer absence of mind. But you must always remember that a single concrete fact, or a saying into which a man has put his whole soul, is worth pages of psychological analysis. We may argue till Doomsday about Swift's character ; his single phrase about "dying like a poisoned rat in a hole" tells us more than all the commentators. The book should be the man himself speaking or acting, and nothing but the man. It should

be such a portrait as reveals the essence of character, and the writer who gives anything that does not tell upon the general effect is like the portrait-painter who allows the chairs and tables, or even the coat and cravat to distract attention from the face. The really significant anecdote is often all that survives of a life ; and such anecdotes must be made to tell properly, instead of being hidden away in a wilderness of the commonplace ; they should be a focus of interest, instead of a fallible extract for a book of miscellanies. How much would be lost of Johnson if we suppress the incident of the penance at Uttoxeter ! It is such incidents that in books, as often in life, suddenly reveal to us whole regions of sentiment but never rise to the surface in the ordinary routine of our day. Authors of biographies come to praise Cæsar, not to bury him ; but too often the burial, under a mass of irrelevance, is all that they really achieve. It requires, indeed, a fine tact to know what is in fact essential. A dexterous use of trivialities often gives a certain reality to the whole. St. Paul's cloak at Troas, I fancy, has often interested readers by a suggestion of certain human realities ; though commentators hesitate about its inspiration of the allusion. Mason, who deserves credit for being the first (or one of the first) to see what use could be made of letters, thought himself at liberty to manipulate Gray's correspondence so as to make it suit his notions of literary art. The stricter canons of later times have led us to condemn the falsification of facts which was involved. But too many modern authors seem to think that Mason's fault consisted not in attributing to Gray things which he did not write, but in omitting anything that he did write. Mason would have been fully justified in making a selection, with a clear statement that it was a selection. Even so admirable a letter-writer as Gray wrote of necessity a good deal which the world could perfectly well spare. In these days many men write several volumes annually, of which nine-tenths is insignificant,

and the remainder consists in great part of repetitions. To choose what is characteristic, with just enough of the trifling matter in which it is embedded to make it natural; to avoid the impression that the writer was always at the highest point of tension, is the problem. I wish that more writers achieved the solution.

Every life, even the life of Dr. Parr, has its interest. We want to know what was under the famous wig. Many modern lives are especially charming in spite of excesses; and in the briefest and driest of dictionary lives I have always found something worth reading. I have only ventured a mild protest against a weakness which naturally grows upon us. My protest comes simply to suggesting that a biography should again be considered as a work of art; the aim should be the revelation, and, as much as possible, the self-revelation, of a character. Everything not strictly relevant to that purpose should be put aside. Some of our ancestors were so anxious to be artistic that they wrote mere novels and mere essays, with occasional allusions to the chief events of their hero's life. We are too apt to fall into the opposite error of simply tumbling out all the materials, valuable or worthless, upon which we can lay our hands; and making even of a life, which has a most natural and obvious principle of unity, a chaotic jumble of incoherent information. The ideal of such writers seems to be a blue-book in which all the evidence bearing upon the subject can be piled like a huge pre-historic cairn over the remains of the deceased, with no more apparent order and constructive purpose than the laws of gravitation enforce spontaneously. Let us have neither the blue-book nor the funeral oration, but something with a beginning, middle, and end, which can cheat us for the time into the belief that we are really in presence of a living contemporary.

LESLIE STEPHEN.

From Temple Bar.
A HARD LITTLE CUSS.
BY MRS. H. H. PENROSE.

CHAPTER VI.

DAMARIS did not awake the next morning until she was disturbed by the hungry wailings of the baby; and then, seeing that the sun was nearly an hour high, she did not feel any great surprise at missing her sister from her side. She wondered drowsily if Rhoda had gone to the kitchen to make a cup of coffee for herself, and why she had not come back to feed the child as she must have heard him crying. The young tyrant's bottle was close at hand, and she proceeded, herself, to make the necessary arrangements for his accommodation, with her eyes only half open, indeed, for yesterday's excitement, following on her early rising, had left her most unusually sleepy. She lay for half an hour longer, not anything like so much as half awake, although her hands were employed from time to time in manipulating the feeding-bottle; and then, more fully aroused by her sister's continued absence, she sat up and called, "Rhoda! Rhoda!" two or three times.

There was no answer from Rhoda who lay cold and dead out in the woods; and Damaris, who had suddenly become painfully wide awake, waited for no more calling, but ran from the room in her nightdress, and began to search within and without, in every possible and impossible place that suggested itself to her. A sudden recollection flashed upon her, as small things will when the mind seems full to overflowing with other matters of the most vital moment, that she had forgotten to shut the door of the fowl-house the evening before. She was quite sure of this, and yet it was shut now; it could have been done only by Rhoda; and, that being the case, Rhoda must be safe and well somewhere, for if anything bad had happened to her, Damaris argued with herself, she could not have been "going around shutting up the chickens." It occurred to her as the most probable solution of the mystery that Jeff Carter had called very

late last night to take Rhoda away, and that, rather than wake her, Rhoda had gone without bidding her good-bye. It was certainly strange that she had left the child, but perhaps, after all, not so very extraordinary under the circumstances. Walking slowly back to the house, Damaris reflected that, if Rhoda had come with the intention of departing thus suddenly, and leaving the child behind, it would quite account for the feeding-bottle. Being simple-hearted herself, she had a not unnatural dislike to cunning devices, and she wished that Rhoda had treated her more frankly, and had asked her to take the child instead of trying to trick her. She also felt very anxious as to what Tom might say to this arrangement, and it was in a decidedly uncomfortable frame of mind that she returned to her charge, to find that he had grown tired of his own company, and was apparently actuated by a laudable ambition to beat the record of all small babies in the length and depth of his infantile howls. Poor Damaris knew almost nothing about children, and she went through agonies of fear lest he should scream himself to death ; but he had been shamefully neglected both night and morning, and he had no idea of letting her off too easily, so she was kept fully employed for a considerable time, and it was nearly nine o'clock before she was free to give a thought to her own breakfast.

She had just finished making her coffee when she heard a loud "Hello ! " from without, and, running to the door, saw a covered wagon standing by the stable, and Jeff Carter advancing towards the house. He saw her, and came in with an odd mixture of embarrassment and assumed joviality in his manner.

"I wasn't going to bother about coming in," he said, "but I've bin waiting around more'n an hour already. Rhoda was to ha' met me up at the top gate at eight o'clock, and I reckoned I'd best come along down to make her hurry a bit."

"Then she hain't gone with you ? " gasped Damaris.

"Do how ? " asked Jeff, in idiomatically expressed perplexity.

"Rhoda is not here," said Damaris, turning very pale ; "and I don't know when she went away."

Jeff stared at her fixedly, and without movement, as though he had been turned to stone.

"She was beside me when I went to sleep last night," Damaris went on, "and when I woke this morning she was gone."

"Did she take the — the child with her ? " Jeff asked, in a voice that was scarcely above a whisper. Damaris shook her head.

"He is asleep now," she said, pointing to the bedroom.

Jeff groaned aloud, for the darkest possibility had occurred to him.

"Which way did she go ? " he asked. " Didn't you try to trail her off ? "

Unfortunately Damaris had not thought of doing that ; she had only run about looking for Rhoda until such slight traces as might have been followed had been obliterated by her own footprints. She told him about the shutting of the fowl-house door, and they went down and looked at it together, but it led to nothing.

In the midst of his own despair, Jeff was careful not to frighten Damaris, and he told her but a small part of what he feared might be the awful truth.

"She was too weak and puny to come all that way," he said, "and I wouldn't hev brought her only she was so desp'rate set on it ; but I was wrong anyhow. Pro'bly she's gone off her head now in a sort o' fever, and gone into the woods, wild like ; but I'll look everywhere around until I find her. I'll jest borrow a saddle, and leave the wagon where it is until I come back." And he began rapidly to unharness his horse.

"When do you expect Rockner back ? " he asked, as he threw on the saddle.

"The earliest he kin git in to-day," answered Damaris. "But how did you and Rhoda know he was in Fort Balandtyn ? "

"Wal, jest this-a-way. He sent word to a man there to hev some stuff ready for him, as he was comin' to fetch it; and when I hearn this and told Rhoda, she would wait for nothin', but must go see you right away, not wanting to let slip the chance when you would be alone. I know I shouldn't hev brought her until she was peart again, but 'twas mighty hard to refuse her anything."

There was a choke in the last words; and, before Damaris had time to make him any answer, he was riding off to the woods in the opposite direction to that which Rhoda had taken the night before.

Damaris went sadly back to the baby and the long delayed breakfast, and having got through her morning's work as quickly as possible, she sat down to await the event with the deserted little creature in her arms.

Tom, who, in the ordinary course of things, would not have left Fort Ballantyne until four o'clock that morning at the earliest, had started before midnight, and was even now at his own gate. He saw without surprise the fresh wheel-tracks in the loose sand, and the traces of a ridden horse coming direct from his house. The covered wagon standing under his shed, which he recognized as belonging to Jeff Carter, offered him no shock or revelation; he had expected it all; he was prepared for anything that might meet him in that desolated home that had been his whole world only yesterday. What Jake Widdin had said, about the poor girl he had spoken of being near her trouble, came back to him with new force; and being by this time in a state of mind, the exact reverse of that of a reasonable being, he promptly concluded that the wagon had been used for the conveyance of a nurse, and was probably destined to carry off Damaris on his return. He was mad, quite mad, with rage and jealousy; and his insanity made no pause to examine the details of possibility or likelihood.

He stole up to his own house like a thief, listened, watched, and crept on again until he stood beside an open

window from which he could see into the next room where Damaris was sitting with the child. Even the sight of her alone, and apparently quite well and strong, suggested no doubts to his diseased imagination; the baby in her arms was a real, palpable fact; it had been born in his absence. Jeff Carter's wagon was outside waiting to carry away both mother and child; or, perhaps, only the child, leaving him still the dupe of the woman who had fooled him; they had not counted on his returning so soon, but this time they should find that he was not to be fooled forever.

He turned from the window, and entered the house abruptly. Damaris started up with a little cry of gladness. She was so glad he had come back to relieve her of all her perplexities, to comfort her about Rhoda; she even forgot to be afraid of what he might say about Rhoda's child. But one look at his face deprived her of the power of speech; she thought in her heart that he would have killed her the next moment, and involuntarily she put out one hand to protect the child.

"Yes, shelter your brat," he said, with fierce contempt. "You needn't be skeared, I ain't goin' to hurt the whelp—that is, if you take it out of my sight before I git much madder. Don't talk, but quit. I see your deary has come to fetch you, so you kin go along out an' wait where you will for him, but you don't wait in my house. He'd best make up his mind to travel without his wagon too, for if he comes back here for it I'll shoot him dead, as sure as my name is Tom Rockner."

"But, Tom, only listen to me. It's all a mistake."

"So it is. I come back a good while before you reckoned to see me. I don't know how you an' he were goin' to fix it, but your plan is sp'ilt anyhow. Hold your tongue, and go."

"But, Tom, you must hear me; it's not ——"

"Look!" he said, making a sudden movement as if to seize the child. "If you say another word I'll take it from you an' knock its brains out. Quit

this, and never show me your face again until you git tired of living."

He pointed to the door as he spoke, but he would not touch her even to thrust her towards it.

She held Rhoda's child closer to her in very terror for its life, and without so much as another look at her husband, lest the temptation to follow it by a word should overpower her, she went forth, as he had bidden her, from the dear home where they had been so happy.

CHAPTER VII.

HALF an hour later Damaris stood on Mrs. Nettleby's front verandah, tapping at the open door ; she was trembling all over both from excitement, and from having walked so fast with a heavy baby in her arms, and she could scarcely find voice to speak when Sarah burst out of the kitchen, hot and cross after a morning over the wash-tub.

" May I come in ? " she asked diffidently.

" Why, cert'nly," said Sarah ; " what do you want to stay outside for ? "

Damaris dropped into a chair and remained silent, in sheer despair of finding a way to begin her story.

" Where'd you git the baby ? " asked Sarah, fixing her sharp eyes on the animated bundle in her visitor's lap.

" It belongs to my sister," answered Damaris, relieved by this breaking of the ice. " She brought it over yesterday."

" That's so," said Sarah ; " I saw the wagon passing with her and young Carter in it ; Joe told me who they were ; and I guessed it was a baby that the girl was holding. Show it."

Damaris obeyed meekly ; and, as it was a really pretty specimen of baby-hood, Sarah only said, " H'm-h'm."

" Is Mr. Nettleby here ? " Damaris asked.

" Yes, I guess he's fooling around in the yard somewhere. Want him ? "

But Joe appeared to answer for himself.

" Hello, Mrs. Rockner ! We hain't seen you for a coon's age ; but you're

always welcome," he said heartily. " But what's wrong ? Don't let her cry, Sarah ; can't you see she looks mighty sick ? "

Sarah, who utterly despised the weakness of tears, made a scornful movement towards the water-pail, and had just grasped the dipper in her bony little hand, when Damaris broke in desperately : —

" Mr. Nettleby, if you please, I came here to ask you to do something for me, if you'll be so kind. I want you to go over to our place, as fast as you can, and wait around the fence until you see Jeff Carter coming, and tell him not to go down to the house — not for anything — because Tom is waiting there to shoot him if he does. Tell Jeff where I am, and to come right here if he gits any news of Rhoda. May I stay just for a short spell ? " she added, turning to Sarah. Sarah nodded ; and Joe, accustomed to obey orders promptly, went away without another word.

" Is it Carter's child ? " asked Sarah abruptly.

" No," said Damaris.

" Then, what does your husband want to shoot him for ? "

" Because he thinks it is."

" But what is it to him anyhow ? "

" That is what I want to tell you about, only — only — I can't," said Damaris.

" Don't be a fool," said Sarah, with encouraging acerbity. " There's no one around to listen ; can't you tell ? "

With many blushes, and much hesitation, Damaris put Tom's unworthy suspicions into words, and began to cry softly again.

" My lands ! " exclaimed Sarah when she had finished. " Is the man a born idiot, to think that children can come into the world all in a flash like that ? "

" I don't reckon he thought at all," said Damaris. " He was mad, and sort o' silly ; but he wouldn't let me say a word, and what kin I do ? "

" Nothing, only wait here until Joe comes back, and then we'll fix him. Come here and put the baby on the bed. I'll be back presently."

She bustled off, and returned in a few minutes with fresh milk for the feeding-bottle, and a glass of root beer for Damaris.

"I guess you're hot after your walk," she said; "that stuff ain't very well made, but it's cooling. Have some more? Well, if you won't, stay there and keep the child quiet while I cook the dinner; and, for all sakes, stop crying. What good do you expect it'll do anyhow? I never saw anything mended by mussing half-a-dozen pocket-hankchers."

Damaris made a feeble offer of her assistance, and was by no means sorry to hear it ungraciously refused, and find herself at liberty to lie down by the child and rest a little, for she felt worn out both in mind and body, and Sarah Nettleby's voice grated like a file on her nervous system.

Before long, Joe returned with the intelligence that he had met Jeff Carter rampaging through the woods; and had delivered his message, but that Jeff seemed to have as little idea of what it all meant as he had himself. Whereupon Sarah took him aside, and gave him an explanation which kept him very silent during dinner time, and Damaris was not troubled with any more questions.

Dinner over, Joe rested himself and smoked a pipe, while the two women washed the plates and dishes, and the baby continued to sleep with a profound regard for good behavior in a strange house.

"I guess you'd like to go home some time this evening, Mrs. Rockner?" said Sarah, vigorously polishing a plate, with her usual unsmiling energy.

"There ain't much use in liking," answered Damaris mournfully; "Tom wouldn't let me in. If I might stay here until the next team is going to Fort Ballantyne, I would ask for a seat in it, and walk from that to Pop's place. I would do all the work I could to make up for the trouble of keeping me, if you'd be so kind as to let me stay, Mrs. Nettleby."

"Oh, that's all right, Mrs. Rockner, as far as trouble goes," answered

Sarah, with creditable readiness. "I was only thinking you might rather be at home, that was all. But, perhaps, you wouldn't go back after being turned out?"

"I'd go this minute if I durst," answered Damaris, without hesitation; "but I don't reckon Tom is safe until he comes to reason, and that ain't noways likely, as I kin see."

"Joe is going over just now to explain things to him," said Sarah. "It will be all right after that."

"Oh, indeed you must not let him go, Mrs. Nettleby! You are both very good, but he must not go into any danger on my account. Tom might shoot him if he thought it was Jeff Carter coming along."

Sarah glanced swiftly at her husband's uncouth figure and ugly face, and remarked, with the nearest approach to a smile that Damaris had yet seen on her countenance; "I ain't skeered o' that. If I thought there was any fear Mr. Rockner would take that old image for your friend Carter, I'd go and do the business myself."

Joe chuckled over his pipe, as though well pleased with the compliment, and was, indeed, so much tickled by the notion, that he went on chuckling at intervals through the day whenever Sarah's facetious remark occurred to him.

"I don't like him to go, for all that," objected Damaris; "if anything bad was to happen I'd never be happy again."

"Oh, yes, you would," said Sarah dryly; "and so would I too, for that matter, although we might all be mighty sorry at the time."

Damaris looked involuntarily at Joe to see how he received this appalling announcement, but he was smiling so placidly that it seemed doubtful whether he had heard it or not; and she turned her eyes away hastily, half ashamed of having looked at all. Sarah laughed outright.

"You calculated to see Joe sort o' shocked," she said, to the completion of Damaris's confusion. "He's used to me; and perhaps I agree with him

better than something sweeter. Now, Joe, 'tis time for you to quit; and tell Mr. Rockner to bring the wagon for his wife. I guess she's had enough walking for one day."

Joe picked himself up slowly from his recumbent attitude in the doorway, looked long and lovingly at his pipe which the domestic rule did not allow to be refilled until evening, and went on his way resigned and submissive, if not exuberantly joyful.

"Have you any idea where your sister is?" asked Sarah, after a pause occupied in piling the ware on a shelf with considerable clatter.

"I wish I had," said Damaris sadly; and she proceeded to indulge in the doubtful consolation of giving a more detailed account of how everything had happened than there had been time to bestow on Jeff that morning. It took a little of the load off her heart to be able to speak freely about her anxiety, and Mrs. Nettleby was at least a ready listener, if not an eminently sympathetic one.

"Jeff thought she had gone crazed with fever," Damaris said; "and if that was so, she might die out in the woods before he could find her. I wish I could go look for her too;" and her voice broke, but she was too much afraid of Sarah to cry again.

"I don't know what's to become of the poor baby if any harm has come to Rhoda," she went on; "for although I promised to take care of it, I don't reckon Tom would ever want to see it around after all that's happened, even supposin' Mr. Nettleby is able to talk him over about me."

"Let young Carter take it home to his mother," suggested Sarah; "she seems to be a soft kind of old party. I guess she'll do as he bids her."

"Jeff won't ever go home until he finds Rhoda."

"Then leave it here until he does."

"But I'd hate to give you the trouble of minding it, Mrs. Nettleby."

"Don't you mean to leave it with me?" asked Sarah sharply.

"Why, if things went so as I c'uldn't take it with myself, and 'twas only for

a day or two, I'd be mighty thankful for your offer, but ——"

"Then what's the good o' talking as if you didn't want to do it?" said Sarah. "There ain't anything else that kin be done as I know of."

"It's very kind of you, I'm sure," began Damaris, but she was cut short with:—

"Oh, *that's* all right, Mrs. Rockner; there ain't any manner o' use in passing compliments. If it squalls too much I'll be kind enough to smother it; and it's beginning now, so you'd best tote it along to the bedroom, and keep it quiet. I have a batch of bread to bake, and I don't want you here any longer."

Damaris took her dismissal with complete resignation; and while Sarah baked herself and her bread in the kitchen, and worked other wonders to which the stove was an accessory, showing a creditable result of cookies, doughnuts, and pumpkin pie, the afternoon glided into evening, and the short dusk followed the sunset without bringing any news of Joe or Tom, Jeff or Rhoda. Once, indeed, Damaris thought she heard a shot; but the wind was very high—she could not be sure—and she would not alarm Mrs. Nettleby needlessly; so she said nothing, and suffered the more for her silence.

CHAPTER VIII.

WHEN Tom had driven Damaris away, his burst of violent passion having exhausted itself, he flung himself into the chair she had just left, and, leaning on the sill of the open window, let his head fall forward on his arms, as though powerless to remain upright, or to bear the light of day. He did not even try to think; his mind became a complete blank; and no sensation remained to him except that of being crushed down by some tremendous weight against which he had no strength to struggle.

Hours—which might for all he knew have been minutes or years—passed before he was able to shake off this state of mental torpor; and then he staggered to his feet and walked to the

open door, gropingly, as though he had been long blind ; and was now for the first time testing his restored sight.

He went out, and, seeing Jeff Carter's wagon still under the shed, he laughed grimly at the thought that Jeff had been afraid to come for it, although he might, up to this time, have done so with impunity. He returned to the house for his rifle, loaded it, and established himself under cover of the wagon with his mind made up to stay there so long as there should be the remotest chance of Jeff's reappearance.

In less than half an hour his patience was rewarded by the sight of a man entering at the gate of the outer fence, and walking towards him very deliberately. At the first glance he crouched lower, and grasped his rifle more firmly ; but at the second, even in his state of semi-insanity, it was impossible that he should credit Jeff Carter with possession of the straggling, awkward limbs and shambling gait of his present visitor. Also, Jeff would certainly have been on horseback ; so Tom felt induced to sit up and show himself, and to relax his grasp of the rifle.

"Hello ! " said Joe Nettleby, coming closer to him. "Ain't this yer place sorter open to be lyin' low for a buck ? "

Tom grunted something about "durned rabbits," and motioned to Joe to sit down — which he did, on his heels — at the door of the shed.

"Now," said Joe, regarding Tom and the rifle alternately with an expression of slight mistrust, "it ain't my way, no more'n 'tis the way of any one else in these parts, to come to the p'int in too great a hurry ; but the business I'm here on to-day ain't goin' to allow no sort o' delay ; I'd like to start in at once, and I'd be obliged if you'd turn your rifle around before I begin — jest out o' direct line with me, you understand."

"You needn't be skeared ; it won't go off," answered Tom sullenly.

"Not of itself," returned Joe placidly ; "but you don't look quite wide-awake this morning, and I was thinkin' that, if you didn't like what I hev got to say, you might send it off o' purpose."

Tom changed the position of the rifle in dogged silence, and Joe went on : —

"What I hev to tell you," he said, "consarns Rhoda Langford, which is right you should know, bein' in a manner her near relation. The poor gal's gone crazed an' lost herself, an' there's folks lookin' for her, an' we reckoned you might like to help."

"She ain't nothin' to me," said Tom, with lowered eyes.

"She is your wife's sister," said Joe, "which comes to the same."

"I hain't got a wife," muttered Tom, but his utterance was thick, and it suited Joe not to hear this startling avowal.

"She lost herself not far from here," he continued, "but to make it all plain, you'd best hear how things happened from the beginning, which I'm told you don't know. She warn't a good gal like her sister Damaris, you see ; but Jeff Carter, he wanted to marry her awful bad, although he knew about the other fellow — not all the time, you see, but towards the end — an' nobody knows who the other fellow is. Wal, all that's got nothing to do with her bein' lost, but it happened this-a-way ; her baby was born about a week ago, after Pop Langford had turned her out o' doors, an' that same Jeff Carter had taken her home to his mother. Then she got sorter anxious

for her own folks, an' wantin' her sister awful bad, only she was skeared o' you to come out here ; so when she found out somehow that you would be in Fort Ballantyne yesterday, she made Jeff bring her an' her baby to see Damaris ; we seen 'em passin' by our place yesterday morning. Then he left Rhoda an' the child here, an' was to come for 'em, ag'in this morning to fetch 'em back ; an' when he come, he found Rhoda had gone away in the night an' left the child with your wife, an' he's bin s'archin' through the woods for her ever since. Your wife is up at our place with Sarah," he added abruptly, as though the information were a mere afterthought. "She has the baby with her, an' though I ain't much of a jedge o' chil'der' " — looking

hard at Tom — “I’d hev said ‘twas a mighty big ‘un for a week old.”

This mild sarcasm was not lost on Tom, but his only reply to it was a groan, as the rifle dropped from his hand, and he threw out his arms before him with a wild, despairing gesture.

“Ain’t you thankful,” asked Joe, laying a hand as gentle as a woman’s on his shoulder, “ain’t you jest everlastin’ thankful that your wife is safe an’ well up at our place? Won’t you hitch up an’ come right along to fetch her?” But Tom shook his head.

“I c’uldn’t face her after what I’ve done,” he said.

“She ain’t one o’ the crusty sort,” said Joe, with appreciation bought by sharp experience. “I’ll bet you hev only to say a kind word to her, an’ she’ll never give a thought to the rest of it. Won’t you come?”

But Tom was obdurate. He would go out into the woods, he said, and help Jeff Carter to search for Rhoda; if they were fortunate he would go for Damaris then, bringing her sister’s safety as a peace-offering; but, if not, he could never dare ask her to come to him again, after having used her as he had done, and being in no way able to make up for his gross injustice and brutality.

Being unable to prevail with better counsel than this, Joe could only offer his company; and as he had not brought his own pony, and Tom’s steed of the lean ribs was fairly worn out from his recent travels, the two men set out together on foot to find Jeff and give what help they could.

All through the afternoon they walked through the woods, in the scrub, and by the lake shore, sometimes calling aloud in the hope of attracting Jeff’s attention if he should be within hearing, but never getting an answer. The sun went down and they were still a good way from the house towards which they now turned, knowing the uselessness of continuing the search until the moon should rise; but Joe was trying to look hopeful.

“I reckon,” he said, “Carter has given it up. He sees she ain’t here.

Pro’bly he thinks she’s set off to walk back to Pop Langford’s, or else to Fort Ballantyne, an’ he’s half-way there by this time. I don’t see much good in goin’ out ag’in. You’d best come for Damaris.”

They had reached the gate, and the swift dusk was closing round them when they were startled by the sound of a shot, distinct, and not very far off.

“I know the exact spot where that come from,” said Tom. “If we run we kin git there before dark.”

Without more words they set off running, keeping such a straight line through the woods as only men accustomed to them from earliest youth could do. Presently they saw through the trees the light-colored form of Jeff Carter’s pony, and a piteous whinny greeted their approach. They redoubled their speed, and reached a large oak-tree while yet enough of light remained for them to see what lay beneath it.

Jeff had ridden and searched untiringly, but it was only at the last hour of the day that he happened to follow the exact direction which poor Rhoda had taken the night before. He had ridden round Rockner’s fence shortly after Tom and Joe had set off to find him, making a minute examination of the barbed wire all along, and started for the woods again at more than one point where he fancied it looked depressed as if by something having been forced through between it and the top railing of wooden slats. The afternoon passed in these fruitless excursions, and the sun was setting when he came at last outside the end of the so-called pasture, and saw that in one place the wire was bent and strained almost to the ground. He dismounted, hitched his pony to a fence post, and went down on hands and knees among the stunted huckleberry bushes to seek for some faint trace of footmarks; but he found something more convincing. Torn and held by the twisted spikes was a fragment of the blue cotton gown that Rhoda had worn the day before. There could be no doubt that he had found the trail at last. He crept a

few yards farther towards the wood, and found another fragment, so small that standing upright he could not have seen it. Then he went back and loosed the pony, leading him by the bridle at full length while he returned to his stooping posture. He went faster now, for he felt that he had found her, and there was a strange lightness at his heart, as though all his troubles were nearly at an end.

He had loved Rhoda Langford as long as he could remember understanding what love meant ; and even now, when every faculty seemed bent on following in her track, his inner mind was full of the day he had first seen her, a laughing fifteen-year-old girl, standing at her father's door, with loose fair hair, and white frock, stained a little on the sleeves with the juice of ripe huckleberries. From that time his heart had been laid under her feet, and freely trampled upon ; but the feet had been too light to stamp the love out of it, nor yet the hope, for, in spite of many rejections, he believed so far in the kindness of fate as to be sure that he must win her in the end. There had been long absences enforced by the exigencies of cattle-hunting ; and, during one of these, evil had befallen the idol of his life ; but she was his idol still ; and, after all that had happened, surely she would be kind to him at last. His fears were all gone ; she was not dead ; she was alive, and not very far away. He was going to find her soon — perhaps a yard or two farther on. She would, no doubt, be ill, weak, and helpless ; but he would soon bring her to shelter and safety, and a passing fever could be no danger to a girl of her splendid natural health and strength. She would live, and in the end she would love him, and the evil past fade into nothingness between them. Only a little farther — He had reached the oak-tree ; and, with a cry that carried the whole grief of his heart in it, he threw himself on the body lying under its branches. At the first glance, without needing the first cold touch, he knew that she was dead, and that the world was empty. There was no hope,

no joy, no grief for him any more. Then he drew his revolver, and fired a shot that startled Tom Rockner and Joe Nettleby, and sent on a ghost of sound to where Damaris sat waiting in the gathering darkness.

CHAPTER IX.

THE long hours of another night and morning passed, and Tom was alone in his desolate house. Joe had been unable to persuade him to go for Damaris. He had nothing but evil tidings to bring her, he said, and it would have been shame enough for him to have faced her with good ; he must even go back and lie on the bed he had made for himself. Joe had waited with him until the rising of the moon, and then helped him to dig a grave, wide and deep, under the oak where those two young lives had come to their untimely end. It was a rough burial, but there was no alternative ; and there was little fear that the spot would be left uncared for. Joe had also undertaken the painful duty of a journey to Fort Ballantyne for the purpose of breaking the news of her son's death to old Mrs. Carter ; Jeff had been her only son, and she was a widow. The strange wagon was gone from the shed at last, for Joe had arranged to take it with him to Mrs. Carter's and to return on horseback, and he had come for it before daybreak so that he might make an early start. Its disappearance was an unspeakable relief to Tom, for he could not have seen it there without a torturing vision of himself crouched down behind it, rifle in hand, lying in wait for the life of a man who had never injured him nor his. He had three or four snatches of uneasy sleep, none exceeding five minutes' duration ; and he awoke from each with cold perspiration pouring from his forehead, and at his heart a sense of sickening certainty that no hand but his had fired the fatal shot that had laid Jeff Carter dead at Rhoda's side. In each case it had taken him quite half an hour of open-eyed wakefulness to drive the conviction from his mind ; and these repeated combats with horror had left

his mental force and self-control so far abated that morning found him as weakly nervous as an hysterical woman. In the last four-and-twenty hours he had passed through a terrible mental fever, beginning in frantic jealousy, and all too nearly leading through crime to madness. The raving was over now, but it had left him trembling and helpless, unfit for thought or action. He wanted Damaris; that much he knew, as a child, too young to reason, knows that it is lonely without its mother.

And Damaris had come to him. His eyes were closed, her step was very light, and he did not know that she was in the room until he felt her hand on his, and her lips on his forehead. He gave a great choking sob, and in another moment her arms were round him, and he was crying like a child with his head on her shoulder.

She was as tender and humble with him as if the fault of the quarrel had been all her own. She watched him, pitying his haggard looks, and thought of everything for him. She drew off his heavy brogans with her own hands, and made him lie down on the bed while she boiled his coffee and prepared breakfast, knowing that he could hardly have told her when he had last eaten. Her eyes were sore with weeping for her dead sister and poor Jeff, but her own grief was laid aside to comfort him, and the hours of suffering she had spent forgotten in remembering what he had gone through alone.

"You know about what's happened?" he asked, when he had begged her forgiveness a hundred times, and blessed her as many more for coming to him in his misery.

"Yes," she said, "Mr. Nettleby told us everything last night. I wanted to come to you then, but they wouldn't let me go till morning; Mr. Nettleby would have brought me on his horse when he came for Jeff's wagon, but I was asleep then after being awake all night, and they wouldn't rouse me."

"You have walked over, then? You must be tired out, and you waiting on me like this! Sit down, Damaris,

jest to please me, and eat some breakfast yourself."

She sat down obediently; but, when she tried to eat, a lump rose in her throat and would not let her swallow the food. Her eyes were filling again, and her thoughts flying back to Rhoda.

"Where is the child?" asked Tom presently, regarding his cup and saucer with shame-faced fixity.

His wife's pale cheeks burned like fire as she answered:—

"I left him outside, asleep on the hay in the barn. I wouldn't bring him in until I knew if—if you ——"

"He shall hev a home here as long as he wants it. Don't you go, Damaris; you ain't fit to stir. I'll fetch him in myself."

He went, and quickly returned, carrying the baby, who of course protested loudly against the conduct of this rude disturber of his slumbers.

"I brought this thing along, too," said Tom, displaying the feeding-bottle, which he handled with a lamentable want of intelligence. "Who owns it?"

"The baby," answered Damaris, taking both property and proprietor from his very willing hands.

"About all he does own, poor little fellow," Tom remarked, regarding him with a still greater degree of kindness since the transfer from his own arms to those of Damaris. "Well, we'll hev the next heifer calf marked for him, an' by the time he's old enough to start on his own account, he'll hev a small stock to begin with; an' he need never know he don't belong to us, unless folks make themselves busy to tell him so. Does he holler all the time like this when he ain't asleep, Damaris?"

"Odd whiles he gits tired; and he don't holler when he has his bottle."

"Then, I reckon you kin shove the thing into his mouth right away; he'll likely stop when he feels it goin' in."

Damaris explained the impossibility of making use of this rough-and-ready mode of argument; and, after a long process of soothing and rocking, succeeded in reducing him to a state of tranquillity.

Afterwards she tried to go about her domestic duties as usual, but the effort was beyond her strength ; and, later in the day, when Tom came into the kitchen with an armful of firewood, he found her lying, white and unconscious, on the floor, where she had evidently fallen in trying to reach the next room.

Before night they knew that they had lost all present prospect of a rival for Rhoda's child, and, for many days after, Damaris was too ill to move, and too weak almost to wish it.

It was in these days that she saw her husband to a greater advantage than she had ever before seen him, even in their time of courtship. He waited on her with the tender thoughtfulness, and patient gentleness of a woman ; cooked little delicacies for her like an experienced old nurse ; learned, with much exercise of ingenuity, how to fill the feeding-bottle ; and carefully kept the child of his adoption out of sight and hearing during those intervals of "hollering" which occurred with such exasperating frequency ; and Damaris began to think that she had never truly known him until now.

When Joe Nettleby returned from Fort Ballantyne he came at once to see Tom, and in this way Sarah learned that Damaris was ill. She then went herself, or sent Joe — usually the latter — two or three times a week to make inquiries, and carry to the invalid sundry articles of food which she deemed Tom incapable of preparing ; but she never asked to see her — greatly, indeed, to the relief of Damaris, who felt that she could better exercise the virtue of gratitude to her benefactress at a little distance — nor showed the very smallest personal interest in the subject of her restoration to health. She offered to take the child home with her, but Tom was growing used to his hollering, and would have missed it.

"I was sorter skeared to give him to her," he said, when making his report to Damaris ; "she might hev put some of her vinegar into him."

Damaris felt it her duty to protest. She had a deep sense of Sarah's sharply bestowed kindness on the occasion of

her sudden ejection ; and although she could as easily have felt affection for a packet of well-constructed tincticks as for Mrs. Nettleby, she acted on a loyal determination always to keep the least repellent side of that remarkable little woman's character steadily before her mental vision.

"I know," Tom admitted reluctantly, "that she behaved a long way better to you than I did, and is behavin' — in a manner — mighty neighborly still, but —" And he shook his head and finished his sentence in the ear of the baby who had no particular reason for contradicting him.

As Damaris grew better, and was able to sit up every day, Tom began to absent himself for a few hours each afternoon, and she knew in her heart where he went, and asked no questions. He would take her there some day, she thought, when she was strong enough ; and meanwhile it would be less painful for him to be allowed to do his work in silence. All the time she followed him in thought, and worked with him.

It was the Sunday before Christmas day that Tom asked her to come with him to see Rhoda's grave — Rhoda's and Jeff's. It was not very far off, and he drove her slowly and carefully through the woods, so that she should not be tired by jolting where the ground was rough. The south wind was soft and warm, and the sun shone like the suns of June in other countries. Rhoda's child was in her arms, and she held him more closely as they came in sight of the fatal oak. All round it, for a distance of twenty yards the pines had been cut down, the stumps burnt out, and the ground ploughed, so that there could be no danger, in the coming year, of forest fires defacing the sacred spot. The grave itself was a little garden, where the flower seeds Tom had sown were coming up already. A fence of pickets surrounded it and the oak-tree, with a little gate to enter by, telling plainly that when the garden was made it was with no intention of future neglect. At the foot of the tree stood a cross, cut out of cypress wood,

and on it were carved the initials, R. L. and J. C.

Tom lifted Damaris from the wagon that she might see it better; and when she was on the ground he kept his arm still round her, and she kissed and thanked him for having made her poor sister's last resting-place such as it was.

"I'd like Widow Carter to see it too," she said. "C'uldn't we ask her to spend a short spell with us, Tom, when Christmas is over?"

"You kin always do jest what your good heart tells you, Damaris," he answered, thinking in deep contentment, how well it was for him that she had done so until now.

Then they opened the gate, and went into the garden of the dead; and, knowing nothing at all about the black iniquity of symbols and emblems, they knelt down together beside the little cross, and said their prayers in singleness of heart, no more doubting that they were looked upon by Jeff and Rhoda than that they were looked upon by God.

CHAPTER X.

ON the last day of this eventful year Damaris went to visit Sarah Nettleby with the intention of thanking her heartily for past kindnesses, and of making some trembling advances towards future friendship, as she felt in duty bound to do. She provided herself with a basketful of sundry vegetables which did not flourish in Joe's garden, and set forth with her offering in her hand. Tom drove her as far as the Nettlebys' fence, and then, seeing Joe at work in his grove, hitched his horse to the gate post, and went to chat with him while Damaris walked on to the house.

Again Sarah was washing. For the sake of coolness, her tub had been carried out of the kitchen, and placed on a bench at the back of the house, and she stood over it, with her thin red arms, bare to a considerable distance above their sharp elbows, and her face shaded from the sun by a discolored old straw hat, innocent of any vanity in

the way of trimming. She looked up with a sort of brisk impatience as her visitor approached, but no gleam of welcome shone from her keen, light eyes, and no smile of pleasure softened the lines of her thin lips.

Damaris had nourished a faint little hope of a more cordial reception. Without putting her thoughts on the subject into words in her own mind, she had relied much on the general fact that it is the natural bent of human beings to feel more amiably disposed towards those whom they have benefited, than towards those who have benefited them. She was fully sensible of the weight of her obligations to Mrs. Nettleby, as well as quite sure that she had never been able to do anything in any way tending to Sarah's personal good; hence her hopefulness. But generalities are not bound to suit all particular cases.

Sarah looked back into her washing-tub, and gave a few more vigorous scrubs to the gown on which she was employed. This was disconcerting, as Damaris was within easy speaking distance, and might reasonably expect some recognition of her presence. As she drew nearer, however, Sarah looked up again, and asked abruptly:

"Do you want me, Mrs. Rockner?"

"I only wanted," answered Damaris, in most evident embarrassment, "to thank you for all you did for me while I was sick, and—and—more than that, for letting me stay here when I was in trouble. I can't tell you—"

"Oh, that's all right, Mrs. Rockner," interrupted Sarah. "I hate thanks. If you have nothin' more partic'lar to say I guess I'll quit, for I have my wash finished, and I want to hang the clothes out to dry."

Damaris felt that it would be culpable weakness to give in at the first rebuff, so she asked, with as pleasant a face as was possible under the circumstances:

"Can I do any chores that would help you as I'm here? Tom is out in the grove talking to Mr. Nettleby, and he ain't ready to take me back home jest this minute."

"Ain't he? Then you set right

down where you are, and keep out of my way till I get through." And Sarah hoisted her piled clothes-basket on to her angular hip as easily as if it had been empty, and stumped off to her drying-lines, betraying the weight she carried only by the depth of footprints left behind her in the sand.

Damaris sat down as directed, feeling utterly crestfallen. She had thought of so many nice things to say to Sarah beforehand, but not one of them had occurred to her at the right time; and, after the crushing snub she had received, she felt that it would be quite impossible to open the subject again. Her single consolation lay in the conviction that no amount of grateful eloquence on her part would have been sufficient to combat Sarah's determined unfriendliness, and with this she had ample time to soothe her self-reproach into tranquillity before Sarah's return.

Tom and Joe came in from the grove at the same time that Sarah reappeared, and it was with a feeling of greater ease and security, induced by their presence, that Damaris offered her basket of vegetables. Mrs. Nettleby's manner of receiving them fully testified to the sincerity of her recently expressed hatred of thanks, and poor Joe's efforts were checked with prompt decision when he rashly attempted to make up for deficiencies.

"Shet your head," said Sarah, "and keep your palaver inside it. And, if you want any supper this evening, you'd better be chopping firewood for me than fooling around with neighbours."

After this broad hint Tom and Damaris had nothing for it but to take their immediate departure, followed regretfully to the gate by Joe. One last effort, indeed, Damaris made before turning away from Sarah in final defeat. As she took her hand in bidding good-bye, she wished her a happy New Year, and bent her head with the half-formed intention of kissing her. In an instant Sarah's arm became rigid, and Damaris was conscious of being held off at the full length of it. It was fortunate that she had no very strong

desire to embrace Sarah, for she certainly would not have attained it without violence.

When they had driven out of sight of the Nettlebys' house, Tom drew her closer to him, noticing, as he looked into her face, that the corners of her mouth were turned ominously downwards.

"Wal?" he said interrogatively, "it warn't no use, I reckon?"

"No," said Damaris sadly. "But she was mighty kind to me for all that, and I'm jest as sure that if we were starving to-morrow, she'd help to feed us, even if she had but little more herself."

"That's so," Tom admitted; "and I reckon there's a crowd more folks in the world that's sorter mixed in their dispositions; but I don't believe there's anywhere among them a harder little cuss than Sarah Nettleby."

From Longman's Magazine.

DRAKE'S VOYAGE ROUND THE WORLD.¹

I SUPPOSE some persons present have heard the name of Lope de Vega, the Spanish poet of Philip II.'s time. Very few of you probably know more of him than his name, and yet he ought to have some interest for us, as he was one of the many enthusiastic young Spaniards who sailed in the Great Armada. He had been disappointed in some love affair. He was an earnest Catholic. He wanted distraction, and it is needless to say that he found distraction enough in the English Channel to put his love troubles out of his mind. His adventures brought before him with some vividness the character of the nation with which his own country was then in the death-grapple, especially the character of the great English seaman to whom the Spaniards universally attributed their defeat. Lope studied the exploits of Francis Drake from his first appearance to his end, and he celebrated those exploits, as England herself has never yet

¹ Lecture delivered at Oxford, Easter Term, 1893.

thought it worth her while to do, by making him the hero of an epic poem. There are heroes and heroes. Lope de Vega's epic is called "The Dragontea." Drake himself is the dragon, the ancient serpent of the Apocalypse. We English have been contented to allow Drake a certain qualified praise. We admit that he was a bold, dexterous sailor, that he did his country good service at the invasion. We allow that he was a famous navigator, and sailed round the world, which no one else had done before him. But—there is always a but—of course he was a robber and a corsair, and the only excuse for him is that he was no worse than most of his contemporaries. To Lope de Vega he was a great deal worse. He was Satan himself, the incarnation of the genius of evil, the arch-enemy of the Church of God.

It is worth while to look more particularly at the figure of a man who appeared to the Spaniards in such terrible proportions. I, for my part, believe a time will come when we shall see better than we see now what the Reformation was and what we owe to it, and these sea-captains of Elizabeth will then form the subject of a great English national epic as grand as the *Odyssey*.

In my own poor way meanwhile I shall try in these lectures to draw you a sketch of Drake and his doings as they appear to myself. To-day I can but give you a part of the rich and varied story, but if all goes well I hope I may be able to continue it at a future time.

I have not yet done with Sir John Hawkins. We shall hear of him again. He became the manager of Elizabeth's dockyards. He it was who turned out the ships that fought Philip's fleet in the Channel in such condition that not a hull leaked, not a spar was sprung, not a rope parted at an unseasonable moment, and this at a minimum of cost. He served himself in the squadron which he had equipped. He was one of the small group of admirals who met that Sunday afternoon in the cabin of the ark Raleigh and sent the fire-ships down to stir Medina Sidonia out

of his anchorage at Calais. He was a child of the sea, and at sea he died, sinking at last into his mother's arms. But of this hereafter. I must speak now of his still more illustrious kinsman, Francis Drake.

I told you the other day generally who Drake was and where he came from; how he went to sea as a boy, found favor with his master, became early an owner of his own ship, sticking steadily to trade. You hear nothing of him in connection with the Channel pirates. It was not till he was five-and-twenty that he was tempted by Hawkins into the negro-catching business, and of this one experiment was enough. He never tried it again.

The portraits of him vary very much, as indeed it is natural that they should, for most of those which pass for Drake were not meant for Drake at all. It is the fashion in this country, and a very bad fashion, when we find a remarkable portrait with no name authoritatively attached to it, to christen it at random after some eminent man, and there it remains to perplex or mislead.

The best likeness of Drake that I know is an engraving in Sir William Stirling Maxwell's collection of sixteenth-century notabilities, representing him, as a scroll says at the foot of the plate, at the age of forty-three. The face is round, the forehead broad and full, with the short, brown hair curling crisply on either side. The eyebrows are highly arched, the eyes firm, clear, and open. I cannot undertake for the color, but I should judge they would be dark grey, like an eagle's. The nose is short and thick, the mouth and chin hid by a heavy moustache on the upper lip, and a close-clipped beard well spread over chin and cheek. The expression is good-humored, but absolutely inflexible, not a weak line to be seen. He was of middle height, powerfully built, perhaps too powerfully for grace, unless the quilted doublet in which the artist has dressed him exaggerates his breadth.

I have seen another portrait of him, with pretensions to authenticity, in

which he appears with a slighter figure, eyes dark, full, thoughtful, and stern, a sailor's cord about his neck with a whistle attached to it, and a ring into which a thumb is carelessly thrust, the weight of the arms resting on it, as if in a characteristic attitude. Evidently this is a carefully drawn likeness of some remarkable seaman of the time. I should like to believe it to be Drake, but I can feel no certainty about it.

We left him returned home in the Judith from San Juan de Ulloa, a ruined man. He had never injured the Spaniards. He had gone out with his cousin merely to trade, and he had met with a hearty reception from the settlers wherever he had been. A Spanish admiral had treacherously set upon him and his kinsman, destroyed half their vessels and robbed them of all that they had. They had left a number of their comrades behind them, for whose fate they might fear the worst. Drake thenceforth considered Spanish property as fair game till he had made up his own losses. He waited quietly for four years till he had re-established himself, and then prepared to try fortune again in a more daring form.

The ill-luck at San Juan de Ulloa had risen from loose tongues. There had been too much talk about it. Too many parties had been concerned. The Spanish government had notice and were prepared. Drake determined to act for himself, have no partners, and keep his own secret. He found friends to trust him with money without asking for explanations. The Plymouth sailors were eager to take their chance with him. His force was absurdly small: a sloop or brigantine of a hundred tons, which he called the Dragon (perhaps, like Lope de Vega, playing on his own name), and two small pinnaces. With these he left Plymouth in the fall of the summer of 1572. He had ascertained that Philip's gold and silver from the Peruvian mines was landed at Panama, carried across the Isthmus on mules' backs on the line of M. Lesseps's Canal, and reshipped at Nombre de Dios at the mouth of the Chagre River.

He told no one where he was going. He was no more communicative than necessary after his return, and the results, rather than the particulars, of his adventure are all that can be certainly known. Discretion told him to keep his counsel, and he kept it.

The Drake family published an account of this voyage in the middle of the next century; but obviously mythical, in parts demonstrably false, and nowhere to be depended on. It can be made out, however, that he did go to Nombre de Dios, that he found his way into the town, and saw stores of bullion there which he would have liked to carry off but could not. A romantic story of a fight in the town I disbelieve, first because his numbers were so small that to try force would have been absurd, and next because if there had been really anything like a battle an alarm would have been raised in the neighborhood, and it is evident that no alarm was given. In the woods were parties of runaway slaves, who were called Cimarons. It was to these that Drake addressed himself, and they volunteered to guide him where he could surprise the treasure convoy on the way from Panama. His movements were silent and rapid. One interesting incident is mentioned which is authentic. The Cimarons took him through the forest to the watershed from which the streams flow to both oceans. Nothing could be seen through the jungle of undergrowth; but Drake climbed a tall tree, saw from the top of it the Pacific glittering below him, and made a vow that one day he would himself sail a ship in those waters.

For the present he had immediate work on hand. His guides kept their word. They led him to the track from Panama, and he had not long to wait before the tinkling was heard of the mule bells as they were coming up the pass. There was no suspicion of danger, not the faintest. The mule train had but its ordinary guard, who fled at the first surprise. The immense booty fell all into Drake's hands—gold, jewels, silver bars—and got with much

ease, as Prince Hal said at Gadshill. The silver they buried, as too heavy for transport. The gold, pearls, rubies, emeralds, and diamonds they carried down straight to their ship. The voyage home went prosperously. The spoils were shared among the adventurers, and they had no reason to complain. They were wise enough to hold their tongues, and Drake was in a condition to look about him and prepare for bigger enterprises.

Rumors got abroad, spite of reticence. Imagination was high in flight just then; rash amateurs thought they could make their fortunes in the same way, and tried it, to their sorrow. A sort of inflation can be traced in English sailors' minds as their work expanded. Even Hawkins, the clear, practical Hawkins, was infected. The crews of Philip's men-of-war went annually in the winter in vast numbers to the Banks of Newfoundland to fish. Hawkins told Elizabeth that if she would let him take four or five ships he would go out and destroy the whole of them. But Elizabeth must order it herself. "Decide, madam," he wrote to her in his great round hand, "and decide quickly. Time flies, and the wings of man's life are plumed with the feathers of death." This was not in Drake's line. He kept to prose and fact. He studied the globe. He examined all the charts that he could get. He became known to the Privy Council and the queen, and prepared for an enterprise which would make his name and frighten Philip in earnest.

The ships which the Spaniards used on the Pacific were usually built on the spot. But Magellan was known to have gone by the Horn, and where a Portuguese could go an Englishman could go. Drake proposed to try. There was a party in Elizabeth's Council against these adventures and in favor of peace with Spain; but Elizabeth herself was always for enterprises of pith and moment. She was willing to help, and others of her Council were willing too, provided their names were not to appear. The responsibility was to be Drake's own. Again, the vessels

in which he was preparing to tempt fortune seem preposterously small. The Pelican, or Golden Hinde, which belonged to Drake himself, was called but one hundred and twenty tons, at best no larger than a modern racing yawl, though perhaps no racing yawl ever left White's yard better found for the work which she had to do. The next, the Elizabeth of London, was said to be eighty tons; a small pinnace of twelve tons, in which we should hardly risk a summer cruise round the Land's End, with two sloops or frigates of fifty and thirty tons, made the rest. The Elizabeth was commanded by Captain Winter, a queen's officer and perhaps a son of the old admiral.

We may credit Drake with knowing what he was about. He and his comrades were carrying their lives in their hands. If they were taken they would be inevitably hanged. Their safety depended on speed of sailing, and specially in the power of working fast to windward, which the heavy, square-rigged ships could not do. The crews all told were one hundred and sixty men and boys. Drake had his brother John with him. Among his officers were the chaplain, Mr. Fletcher, another minister of some kind who spoke Spanish, and in one of the sloops a mysterious Mr. Doughty. Who Mr. Doughty was, and why he was sent out, is uncertain. When an expedition of consequence was on hand, the Spanish party in the Cabinet usually attached to it some second in command whose business was to defeat the object. When Drake went to Cadiz in after years to singe King Philip's beard, he had a colleague sent with him whom he had to lock into his cabin before he could get to his work. So far as I can make out, Mr. Doughty had a similar commission. On this occasion secrecy was impossible. It was generally known that Drake was going to the Pacific through Magellan Straits, to act afterwards on his own judgment. The Spanish ambassador, now Don Bernardino de Mendoza, in informing Philip of what was intended, advised him to send out orders for the instant

sinking of every English ship, and the execution of every English sailor, that appeared on either side the Isthmus in West Indian waters. The orders were despatched, but so impossible it seemed that an English pirate could reach the Pacific, that the attention was confined to the Caribbean Sea, and not a hint of alarm was sent across to the other side.

On November 15, 1577, the Pelican and her consort sailed out of Plymouth Sound. The elements frowned on their start. On the second day they were caught in a winter gale. The Pelican sprung her mainmast, and they put back to refit and repair. But Drake defied auguries. Before the middle of December all was again in order. The weather mended, and with a fair wind and smooth water they made a fast run across the Bay of Biscay and down the coast to the Cape de Verde Islands. There taking up the north-east Trades, they struck across the Atlantic, crossed the line, and made the South American continent in latitude 33° south. They passed the mouth of the Plate River, finding to their astonishment fresh water at the ship's side in fifty-four fathoms. All seemed so far going well, when one morning Mr. Doughty's sloop was missing, and he along with her. Drake, it seemed, had already reason to distrust Doughty, and guessed the direction in which he had gone. The Marigold was sent in pursuit, and he was overtaken and brought back. To prevent a repetition of such a performance, Drake took the sloop's stores out of her, burnt her, distributed the crew through the other vessels, and took Mr. Doughty under his own charge. On June 20 they reached Port St. Juliens on the coast of Patagonia. They had been long on the way, and the southern winter had come round, and they had to delay further to make more particular inquiry into Doughty's desertion. An ominous and strange spectacle met their eyes as they entered the harbor. In that utterly desolate spot a skeleton was hanging on a gallows, the bones picked clean by the vultures. It was one of

Magellan's crew who had been executed there for mutiny fifty years before. The same fate was to befall the unhappy Englishman who had been guilty of the same fault. Without the strictest discipline it was impossible for the enterprise to succeed, and Doughty had been guilty of worse than disobedience. We are told briefly that his conduct was found tending to contention, and threatening the success of the voyage. Part he was said to have confessed; part was proved against him—one knows not what. A court was formed out of the crew. He was tried, as near as circumstances allowed, according to English usage. He was found guilty, and was sentenced to die. He made no complaint, or none of which a record is preserved. He asked for the sacrament, which was, of course, allowed, and Drake himself communicated with him. They then kissed each other, and the unlucky wretch took leave of his comrades, laid his head on the block, and so ended. His offence can be only guessed; but the suspicious curiosity about his fate which was shown afterwards by Mendoza makes it likely that he was in Spanish pay. The ambassador cross-questioned Captain Winter very particularly about him, and we learn one remarkable fact from Mendoza's letters not mentioned by any English writer, that Drake was himself the executioner, choosing to bear the entire responsibility.

"This done," writes an eye-witness, "the general made divers speeches to the whole company, persuading us to unity, obedience, and regard of our voyage, and for the better confirmation thereof willed every man the Sunday following to prepare himself to receive the communion as Christian brothers and friends ought to do, which was done in very reverend sort; and so with good contentment every man went about his business."

You must take this last incident into your conception of Drake's character, think of it how you please.

It was now midwinter, the stormiest season of the year, and they remained

for six weeks in Port St. Julian. They burnt the twelve-ton pinnace, as too small for the work they had now before them, and there remained only the Pelican, the Elizabeth, and the Marigold. In cold wild weather they weighed at last, and on August 20 made the opening of Magellan's Straits. The passage is seventy miles long, tortuous and dangerous. They had no charts. The ship's boats led, taking soundings as they advanced. Icy mountains overhung them on either side; heavy snow fell below. They brought up occasionally at an island to rest the men, and let them kill a few seals and penguins to give them fresh food. Everything they saw was new, wild, and wonderful.

Having to feel their way, they were three weeks in getting through. They had counted on reaching the Pacific that the worst of their work was over, and that they could run north at once into warmer and calmer latitudes. The peaceful ocean, when they entered it, proved the stormiest they had ever sailed on. A fierce westerly gale drove them six hundred miles to the south-east outside the Horn. It had been supposed, hitherto, that Tierra del Fuego was solid land to the South Pole, and that the Straits were the only communication between the Atlantic and the Pacific. They now learned the true shape and character of the Western Continent. In the latitude of Cape Horn, a westerly gale blows forever round the globe; the waves the highest anywhere known. The Marigold went down in the tremendous encounter. Captain Winter in the Elizabeth made his way back into Magellan's Straits. There he lay for three weeks, lighting fires nightly to show Drake where he was, but no Drake appeared. They had agreed, if separated, to meet on the coast in the latitude of Valparaiso; but Winter was chicken-hearted, or else traitorous like Doughty, and sore, we are told, "against the mariners' will," when the three weeks were out, he sailed away for England, where he reported that all the ships were lost but the Pel-

ican, and that the Pelican was probably lost too.

Drake had believed better of Winter, and had not expected to be so deserted. He had himself taken refuge among the islands which form the Cape, waiting for the spring and milder weather. He used the time in making surveys, and observing the habits of the native Patagonians, whom he found a tough race, going naked amidst ice and snow. The days lengthened, and the sea smoothed at last. He then sailed for Valparaiso, hoping to meet Winter there, as he had arranged. At Valparaiso there was no Winter, but there was in the port instead a great galleon just come in from Peru. The galleon's crew took him for a Spaniard, hoisted their colors, and beat their drums. The Pelican shot alongside. The English sailors in high spirits leapt on board. A Plymouth lad who could speak Spanish knocked down the first man he met with an "Abajo, perro!" "Down, you dog, down!" No life was taken; Drake never hurt man if he could help it. The crew crossed themselves, jumped overboard, and swam ashore. The prize was examined. Four hundred pounds weight of gold was found in her, besides other plunder.

The galleon being disposed of, Drake and his men pulled ashore to look at the town. The people had all fled. In the church they found a chalice, two cruets, and an altar-cloth, which were made over to the chaplain to improve his communion furniture. A few pipes of wine and a Greek pilot who knew the way to Lima completed the booty.

"Shocking piracy," you will perhaps say. But what Drake was doing would have been all right and good service had war been declared, and the essence of things does not alter with the form. In essence there was war, deadly war, between Philip and Elizabeth. Even later, when the Armada sailed, there had been no formal declaration. The reality is the important part of the matter. It was but stroke for stroke, and the English arm proved the stronger.

Still hoping to find Winter in ad-

vance of him, Drake went on next to Tarapaca, where silver from the Andes mines was shipped for Panama. At Tarapaca there was the same unconsciousness of danger. The silver bars lay piled on the quay, the muleteers who had brought them were sleeping peacefully in the sunshine at their side. The muleteers were left to their slumbers. The bars were lifted into the English boats. A train of mules or llamas came in at the moment with a second load as rich as the first. This, too, went into the Pelican's hold. The bullion taken at Tarapaca was worth nearly half a million ducats.

Still there were no news of Winter. Drake began to realize that he was now entirely alone, and had only himself and his own crew to depend on. There was nothing to do but to go through with it, danger adding to the interest. Arica was the next point visited. Half a hundred blocks of silver were picked up at Arica. After Arica came Lima, the chief depot of all, where the grandest haul was looked for. At Lima, alas! they were just too late. Twelve great hulks lay anchored there. The sails were unbent, the men were ashore. They contained nothing but some chests of reals and a few bales of silk and linen. But a thirteenth, called by the gods Our Lady of the Conception, called by men Cacafuego, a name incapable of translation, had sailed a few days before for the Isthmus with the whole produce of the Lima mines for the season. Her ballast was silver, her cargo gold and emerald and rubies.

Drake deliberately cut the cables of the ships in the roads, that they might drive ashore and be unable to follow him. The Pelican spread her wings, every feather of them, and sped away in pursuit. He would know the Cacafuego, so he learnt at Lima, by the peculiar cut of her sails. The first man who caught sight of her was promised a gold chain for his reward. A sail was seen on the second day. It was not the chase, but it was worth stopping for. Eighty pounds weight of gold was found, and a great gold

crucifix, set with emeralds said to be as large as pigeon's eggs. They took the kernel. They left the shell. Still on and on. We learn from the Spanish accounts that the viceroy of Lima, as soon as he recovered from his astonishment, despatched ships in pursuit. They came up with the last plundered vessel, heard terrible tales of the rovers' strength, and went back for a larger force. The Pelican meanwhile went along upon her course for eight hundred miles. At length, off Quito and close under the shore, the Cacafuego's peculiar sails were sighted, and the gold chain was claimed. There she was, freighted with the fruit of Aladdin's garden, going lazily along a few miles ahead. Care was needed in approaching her. If she guessed the Pelican's character, she would run in upon the land and they would lose her. It was afternoon. The sun was still above the horizon, and Drake meant to wait till night, when the breeze would be off the shore, as in the tropics it always is.

The Pelican sailed two feet to the Cacafuego's one. Drake filled his empty wine-skins with water and trailed them astern to stop his way. The chase supposed that she was followed by some heavy-loaded trader, and, wishing for company on a lonely voyage, she slackened sail and waited for him to come up. At length the sun went down into the ocean, the rosy light faded from off the snows of the Andes; and when both ships had become invisible from the shore, the skins were hauled in, the night wind rose, and the water began to ripple under the Pelican's bows. The Cacafuego was swiftly overtaken, and when within a cable's length a voice hailed her to put her head into the wind. The Spanish commander, not understanding so strange an order, held on his course. A broadside brought down his mainyard, and a flight of arrows rattled on his deck. He was himself wounded. In a few minutes he was a prisoner, and Our Lady of the Conception and her precious freight were in the corsair's power. The wreck was cut away; the

ship was cleared ; a prize crew was put on board. Both vessels turned their heads to the sea. At daybreak no land was to be seen, and the examination of the prize began. The full value was never acknowledged. The invoice, if there was one, was destroyed. The accurate figures were known only to Drake and Queen Elizabeth. A published schedule acknowledged to twenty tons of silver bullion, thirteen chests of silver coins, and a hundredweight of gold, but there were gold nuggets besides in indefinite quantity, and "a great store" of pearls, emeralds, and diamonds. The Spanish government proved a loss of a million and a half of ducats, excluding what belonged to private persons. The total capture was immeasurably greater.

Drake, we are told, was greatly satisfied. He thought it prudent to stay in the neighborhood no longer than necessary. He went north with all sail set, taking his prize along with him. The master, San Juan de Anton, was removed on board the Pelican to have his wound attended to. He remained as Drake's guest for a week, and sent in a report of what he observed to the Spanish government. One at least of Drake's party spoke excellent Spanish. This person took San Juan over the ship. She showed signs, San Juan said, of rough service, but was still in fine condition, with ample arms, spare rope, mattocks, carpenters' tools of all descriptions. There were eighty-five men on board all told, fifty of them men-of-war, the rest young fellows, ship-boys and the like. Drake himself was treated with great reverence ; a sentinel stood always at his cabin door. He dined alone with music.

No mystery was made of the Pelican's exploits. The chaplain showed San Juan the crucifix set with emeralds, and asked him if he could seriously believe that to be God. San Juan asked Drake how he meant to go home. Drake showed him a globe with three courses traced on it. There was the way that he had come, there was the way by China and the Cape of Good Hope, and there was a third way which

he did not explain. San Juan asked if Spain and England were at war. Drake said he had a commission from the queen. His captures were for her, not for himself. He added afterwards that the viceroy of Mexico had robbed him and his kinsman, and he was making good his losses.

Then, touching the point of the sore, he said, "I know the viceroy will send for thee to inform himself of my proceedings."

Tell him "he shall do well to put no more Englishmen to death, and to spare those he has in his hands, for if he do execute them I will hang two thousand Spaniards and send him their heads."

After a week's detention San Juan and his men were restored to the empty Cacafuego, and allowed to go. On their way back they fell in with the two cruisers sent in pursuit from Lima, reinforced by a third from Pauama. They were now fully armed ; they went in chase, and according to their own account came up with the Pelican. But, like Lope de Vega, they seemed to have been terrified at Drake as a sort of devil. They confessed that they dared not attack him, and again went back for more assistance. The viceroy abused them as cowards, arrested the officers, despatched others again with peremptory orders to seize Drake, even if he was the devil, but by that time their questionable visitor had flown. They found nothing, perhaps to their relief.

A despatch went instantly across the Atlantic to Philip. One squadron was sent off from Cadiz to watch the Straits of Magellan and another to patrol the Caribbean Sea. It was thought that Drake's third way was no seaway at all, that he meant to leave the Pelican at Darien, carry his plunder over the mountains, and build a ship at Honduras to take him home. His real idea was that he might hit off the passage to the north of which Frobisher and Davis thought they had found the eastern entrance. He stood on towards California, picking up an occasional straggler in the China trade, with silk,

porcelain, gold, and emeralds. Fresh water was a necessity. He put in at Guatulco for it, and his proceedings were humorously prompt. The alcaldes at Guatulco were in session trying a batch of negroes. An English boat's crew appeared in court, tied the alcaldes hand and foot, and carried them off to the Pelican, there to remain as hostages till the water-casks were filled.

North again he fell in with a galleon carrying out a new governor to the Philippines. The governor was relieved of his boxes and his jewels, and then, says one of the party, "Our general thinking himself in respect of his private injuries received from the Spaniard, as also their contempt and indignities offered to our country and prince, sufficiently satisfied and revenged, and supposing her Majesty would rest contented with this service, began to consider the best way home." The first necessity was a complete overhaul of the ship. Before the days of copper sheathing weeds grew thick under water. Barnacles formed in clusters, stopping the speed, and sea-worms bored through the planking. Twenty thousand miles lay between the Pelican and Plymouth Sound, and Drake was not a man to run idle chances. Still holding his north course till he had left the furthest Spanish settlement far to the south, he put into Canoa Bay in California, laid the Pelican ashore, set up forge and workshop, and repaired and re-rigged her with a month's labor from stem to stern. With every rope new set up and new canvas on every yard, he started again on April 16, 1579, and continued up the coast to Oregon. The air grew cold though it was summer. The men felt it from having been so long in the tropics, and dropped out of health. There was still no sign of a passage. If passage there was, Drake perceived that it must be of enormous length. Magellan's Straits, he guessed, would be watched for him, so he decided on the route by the Cape of Good Hope. In the Philippine ship he had found a chart of the Indian Archipelago. With the help of this and his own skill he

hoped to find his way. He went down again to San Francisco, landed there, found the soil teeming with gold, made acquaintance with an Indian king who hated the Spaniards and wished to become an English subject. But Drake had no leisure to annex new territories. Avoiding the course from Mexico to the Philippines, he made a direct course to the Moluccas, and brought up again at the Island of Celebes. Here the Pelican was a second time docked and scraped. The crew had a month's rest among the fireflies and vampires of the tropical forest. Leaving Celebes, they entered on the most perilous part of the whole voyage. They wound their way among coral reefs and low islands scarcely visible above the water-line. In their chart the only outlet marked into the Indian Ocean was by the Straits of Malacca. But Drake guessed rightly that there must be some nearer opening, and felt his way looking for it along the coast of Java. Spite of all his care, he was once on the edge of destruction. One evening as night was closing in a grating sound was heard under the Pelican's keel. In another moment she was hard and fast on a reef. The breeze was light and the water smooth, or the world would have heard no more of Francis Drake. She lay immovable till day-break. At dawn the position was seen not to be entirely desperate. Drake himself showed all the qualities of a great commander. Cannon were thrown over and cargo that was not needed. In the afternoon, the wind changing, the lightened vessel lifted off the rocks and was saved. The hull was uninjured, thanks to the Californian repairs. All on board had behaved well with the one exception of Mr. Fletcher, the chaplain. Mr. Fletcher, instead of working like a man, had whined about divine retribution for the execution of Doughty.

For the moment Drake passed it over. A few days after, they passed out through the Straits of Sunda, where they met the great ocean swell, Homer's *μέγα κύμα θαλάσσης*, and they knew then that all was well.

There was now time to call Mr. Fletcher to account. It was no business of the chaplain to discourage and dispirit men in a moment of danger, and a court was formed to sit upon him. An English captain on his own deck represents the sovereign and is head of Church as well as State. Mr. Fletcher was brought to the forecastle, where Drake, sitting on a sea-chest with a pair of *pantoufles* in his hand, excommunicated him, pronounced him cut off from the Church of God, given over to the devil for the chastising of his flesh, and left him chained by the leg to a ring-bolt to repent of his cowardice.

In the general good-humor punishment could not be of long duration. The next day the poor chaplain had his absolution and returned to his berth and his duty. The Pelican met with no more adventures. Sweeping in fine, clear weather round the Cape of Good Hope, she touched once for water at Sierra Leone, and finally sailed in triumph into Plymouth harbor, where she had been long given up for lost, having traced the first furrow round the globe. Winter had come eighteen months before, but could report nothing. The news of the doings on the American coast had reached England through Madrid. The Spanish ambassador had been furious. It was known that Spanish squadrons had been sent in search. Complications would arise if Drake brought his plunder home, and timid politicians hoped that he was at the bottom of the sea. But here he was, actually arrived with a monarch's ransom in his hold.

English sympathy with an extraordinary exploit is always irresistible. Shouts of applause ran through the country, and Elizabeth, every bit of her an Englishwoman, felt with her subjects. She sent for Drake to London, made him tell his story over and over again, and was never weary of listening to him. As to injury to Spain, Philip had lighted a fresh insurrection in Ireland, which had cost her dearly in lives and money. For Philip to demand compensation of England

on the score of justice was a thing to make the gods laugh.

So thought the queen. So, unfortunately, did not think some members of her Council, Lord Burghley among them. Mendoza was determined that Drake should be punished and the spoils disgorged, or else that he would force Elizabeth upon the world as the confessed protectress of piracy. Burghley thought that, as things stood, some satisfaction (or the form of it) would have to be made.

Elizabeth hated paying back as heartily as Falstaff, nor had she the least intention of throwing to the wolves a gallant Englishman, with whose achievements the world was ringing. She was obliged to allow the treasure to be registered by a responsible official, and an account rendered to Mendoza; but for all that she meant to keep her own share of the spoils. She meant, too, that Drake and his brave crew should not go unrewarded. Drake himself should have ten thousand pounds at least.

Her action was eminently characteristic of her. On the score of real justice there was no doubt at all how matters stood between herself and Philip, who had tried to dethrone and kill her.

The Pelican lay still at Plymouth with the bullion and jewels untouched. She directed that it should be landed and scheduled. She trusted the business to Edmund Tremayne, of Sydenham, a neighboring magistrate, on whom she could depend. She told him not to be too inquisitive, and she allowed Drake to go back and arrange the cargo before the examination was made. Let me now read you a letter from Tremayne himself to Sir Francis Walsingham:—

"To give you some understanding how I have proceeded with Mr. Drake: I have at no time entered into the account to know more of the value of the treasure than he made me acquainted with; and to say truth I persuaded him to impart to me no more than need, for so I saw him commanded in her Majesty's behalf that

he should reveal the certainty to no man living. I have only taken notice of so much as he *has* revealed, and the same I have seen to be weighed, registered, and packed. And to observe her Majesty's commands for the ten thousand pounds, we agreed he should take it out of the portion that was landed secretly, and to remove the same out of the place before my son Henry and I should come to the weighing and registering of what was left ; and so it was done, and no creature living by me made privy to it but himself ; and myself no privier to it than you may perceive by this.

"I see nothing to charge Mr. Drake further than he is inclined to charge himself, and withal I must say he is inclined to advance the value to be delivered to her Majesty, and seeking in general to recompense all men that have been in the case dealers with him. As I dare take an oath, he will rather diminish his own portion than leave any of them unsatisfied. And for his mariners and followers I have seen here as eye-witness, and have heard with my ears, such certain signs of good-will as I cannot yet see that any of them will leave his company. The whole course of his voyage hath showed him to be of great valor ; but my hap has been to see some particulars, and namely in this discharge of his company, as doth assure me that he is a man of great government, and that by the rules of God and his book, so as proceeding on such foundation his doings cannot but prosper."

The result of it all was that deductions were made from the capture equivalent to the property which Drake and Hawkins held themselves to have been treacherously plundered of at San Juan de Ulloa, with perhaps other liberal allowances for the cost of recovery. An account of part of what remained was then given to Mendoza. It was not returned to him or to Philip, but was laid up in the Tower till the final settlement of Philip's and the queen's claims on each other—the cost, for one thing, of the rebellion in Ireland. Commissioners met and ar-

gued and sat on ineffectually till the Armada came and the discussion ended, and the talk of restitution was over. Meanwhile opinion varied about Drake's own doings as it has varied since. Elizabeth listened spellbound to his adventures, sent for him to London again, and walked with him publicly about the parks and gardens. She gave him a second ten thousand pounds. The Pelican was sent round to Deptford ; a royal banquet was held on board, Elizabeth attended and Drake was knighted. Mendoza claiored for the treasure in the Tower to be given up to him ; Walsingham wished to give it to the Prince of Orange ; Leicester and his party in the Council, who had helped to fit Drake out, thought it ought to be divided among themselves, and unless Mendoza lies they offered to share it with him if he would agree to a private arrangement. Mendoza says he answered that he would give twice as much to chastise such a bandit as Drake. Elizabeth thought it should be kept as a captured pawn in the game, and so in fact it remained after the deductions which we have seen had been made.

Drake was lavish of his presents. He presented the queen with a diamond cross and a coronet set with splendid emeralds. He gave Bromley, the lord chancellor, eight hundred dollars' worth of silver plate, and as much more to other members of the Council. The queen wore her coronet on New Year's day ; the chancellor was content to decorate his sideboard at the cost of the Catholic king. Burghley and Sussex declined the splendid temptation ; they said they could accept no such precious gifts from a man whose fortune had been made by plunder.

Burghley lived to see better into Drake's value. Meanwhile, what now are we, looking back over our history, to say of these things,—the Channel privateering ; the seizure of Alva's army money ; the sharp practice of Hawkins with the Queen of Scots and King Philip ; or this amazing performance of Sir Francis Drake in a vessel

no larger than a second-rate yacht of a modern noble lord?

Resolution, daring, professional skill, all historians allow to these men; but, like Burghley, they regard what they did as piracy, not much better, if at all better, than the later exploits of Morgan and Kidd. So cried the Catholics who wished Elizabeth's ruin; so cried Lope de Vega and King Philip. In milder language, the modern philosopher repeats the unfavorable verdict, rejoices that he lives in an age when such doings are impossible, and apologizes faintly for the excesses of an imperfect age. May I remind the philosopher that we live in an age when other things have also happily become impossible, and that if he and his friends were liable when they went abroad for their summer tours to be snapped up by the familiars of the Inquisition, whipped, burnt alive, or sent to the galleys, he would perhaps think more leniently of any measures by which that respectable institution and its masters might be induced to treat philosophers with greater consideration?

Again, remember Doctor Johnson's warning, Beware of cant. In that intensely serious century men were more occupied with the realities than the forms of things. By encouraging rebellion in England and Ireland, by burning so many scores of poor English seamen and merchants in fools' coats at Seville, the king of Spain had given Elizabeth a hundred occasions for declaring war against him. Situated as she was, with so many disaffected Catholic subjects, she could not begin a war on such a quarrel. She had to use such resources as she had, and of these resources the best was a splendid race of men, who were not afraid to do for her at their own risk what commissioned officers would and might have justly done had formal war been declared, men who defeated the national enemy with materials conquered from himself, who were devoted enough to dispense with the personal security which the sovereign's commission would have extended to prisoners of

war, and face the certainty of being hanged if they were taken. Yes; no doubt by the letter of the law of nations Drake and Hawkins were corsairs of the same stuff as Ulysses, as the rovers of Norway. But the common sense of Europe saw through the form to the substance which lay below it, and the instinct of their countrymen gave them a place among the fighting heroes of England, from which I do not think they will be deposed by the eventual verdict of history.

From The Nineteenth Century.
THROUGH THE KHYBER PASS.

LATE in the evening on the 2nd of December, I left Lahore by the mail to Peshawar, an eighteen hours' journey. When I awoke next morning near Rawal Pindi the train was winding slowly among low hills, which grew higher as the morning advanced. About noon it glided out of a cutting into Attock station, and we saw in front across its path a deep valley between sloping irregular rocks, which hemmed in on each side the grey swirling waters of a swift river. The train crossed the valley by a bridge high above the stream, giving us glimpses on either hand of the gorge of the Indus. The stream flows between grey rocks which rise on each side in broken, stony slopes to the tops of the hills, a mile from the river and a thousand feet above it. The hills are unmitigated rock, bare and bleak. Here and there a sage-green bush dots the hillside, but it only emphasizes the general barrenness of the scene. Across the bridge the train turns to the right and goes up the valley for a mile or two, giving us glimpses of the river and of the great bridge. As we near the station at Khairabad we look across the river at the old Mogul fort of Attock, its high, loopholed walls and battlements on a cliff a hundred feet above the water. Below, to the left of it, is a wide plain stretching as far as the eye can reach, like a vast swamp, with one or two silvery bands of water, the winter

streams of the Indus approaching the gorge. Beyond Khairabad the railway leaves the Indus and follows the valley of its tributary, the Kabul River. At four o'clock we pass the citadel of Peshawur, crowning a rock that juts up from the plain, and a few minutes later the train stops at Peshawar Cantonment, the Ultima Thule of British India.

The cantonment, at an Indian town, means the place where the English live. The native town is usually enclosed by high walls and accessible only by a few gates ; it is brimful of people, who crowd its bazaars or shop streets. Quite outside the town and a mile or two away is the cantonment, an un-walled district, where each house stands in its own inclosure or compound, and where the regiments, British or native, are quartered in "lines" or rows of huts. The cantonment usually has wide, well-kept roads, with a grassy margin and avenues of fine trees, giving it the appearance of a great park. The English visitor, if he stays with friends, might be a week without seeing the native town at all, unless his curiosity prompted an excursion in search of it. There is always in the cantonment a club, with a ladies' wing (unless the ladies have a gymkhana or club of their own), and, besides the various parade grounds, a polo ground or a tennis court, so that a visitor bent only on amusement has plenty of resources.

The town gate of Peshawar is a mile from the cantonment, and the morning after my arrival I drove in with no companion but a native interpreter. Peshawar, with its mud and wood houses, its latticed windows, and its multitude of men, is infinitely picturesque. But the impression of the first visit upon an Englishman is not due to the quaint appearance of the houses nor to the Eastern dress of the inhabitants. There are about eighty thousand natives in the city. As soon as you are through the gate and inside the walls you are among them. Not another Englishman is to be seen, and possibly enough you are, at the moment, the

only one in the town. Every one looks at you. There is no staring and no rudeness, but you feel the eyes. The looks of the first half-dozen men you pass, as they sit in their shops or stand in the street, give you a new and strange sensation. You straighten yourself and hold your head up, with a resolve, of which you are hardly conscious till afterwards, that if a knife is plunged into your back you will not flinch. The eyes about you suggest that if there were no cantonment, no others to ask for an account of you, your throat would be cut and your corpse thrown away, and that the people in the street would look on without moving. You immediately feel that there is a responsibility in being an Englishman ; you are a representative of your race, and all that you do and say must be worthy of the position. The first duty is to not mind the eighty thousand people in Peshawar nor anything they may do. Those first five minutes in the Peshawar bazaar reveal to you the secret of British power in the East. It is impossible without utter fearlessness.¹

I had been advised to see the view from a watch tower in the fort. As I stepped on to the roof my first glance was along the railway line towards Attock and the valley of the Kabul River, by which I had come. This valley was the only opening in a circle of mountains surrounding the spacious plain. To the left the plain would have seemed endless but that beyond it were visible giant mountains one behind another, and above and beyond them all the cold, pale snows of the Hindu Kush. Turning round, I found myself facing a semicircle of black, rugged hills about fifteen miles away, that

¹ The undoubted hostility of part, at least, of the population of Peshawar is, of course, not representative of any general feeling in India. But I have seen the same expression and had the same feelings resulting from it in Multan and Lucknow. Each of these cities was the scene and bears the marks of a bitter conflict : Multan of the murder of Agnew and Anderson and the subsequent siege, and Lucknow of the siege and relief of the residency. I was startled, however, to observe the same expression, unmistakable, on the faces of Bengalis at Calcutta.

seemed to rise straight up out of the plain and shut it in like a wall. No outlets were visible, but the directions of the passes that cross the hills were pointed out by a Sikh policeman : to the south the Kohat Pass, to the west the Bazaar Valley and the Khyber, to the right of which the Kabul River issues from the mountains. The flat ground at our feet is British territory ; but the mountains all round are Afghan. Here in the plain the queen's peace is kept ; there in the mountains live Pathan tribes who acknowledge neither queen nor ameer. We are at the edge of the empire.

The Khyber Pass is generally thought of as the northernmost gate in a great mountain wall separating India from Afghanistan. In reality it is the small gate through an outer wall, leading into an inclosure, the plain of Jellallabad. Beyond this is the real wall with its great gates, the passes from Jellallabad to Kabul.

Put three basins in a row, and where two of them touch each other break down the edges a little. Call the middle basin that of Jellallabad, the left-hand one that of Kabul, and the right-hand one that of Peshawar. The broken-down rim between Peshawar and Jellallabad is the Khyber range, a block of hills twenty miles through from basin to basin and over five thousand feet high. The broken-down, double rim between Jellallabad and Kabul is a mass of mountains (the Karkacha and Kurd Kabul ranges) some ten thousand feet high and fifty miles through from basin to basin. Except at these two broken-down ends the rim of the Jellallabad basin is made up all round of much higher and practically impassable mountains. Accordingly all traffic between Peshawar and Kabul must go through the Jellallabad valley, getting in or coming out through the Khyber range. The range has only one road through it. There is a gorge through which the Kabul River forces its way, and there are paths, difficult, high, and tortuous, but the only road by which traffic is possible follows the Khyber Pass.

The Jellallabad basin belongs to the ameer and the Peshawar basin to Great Britain, but the Khyber block of mountains belongs to the tribes who inhabit it — independent Afghans or, in border language, Pathans. These Khyber Pathans can raise but scant crops from their native rocks. They cannot "live on their holdings," and must needs have some other resource by which to eke out their sustenance. This additional source of revenue is the pass. From time immemorial they have taken toll from all who go through. Being poor, uncivilized, and accustomed to fight, their methods of levying what they conceive to be their due are rough and irregular. But from their point of view the dues are their traditional, inalienable right. They are, however, very businesslike people. Their point is to receive the money. They are by no means disposed to insist on rough modes of collection. Accordingly they are open to contract for the tolls. During the first Afghan war they took a rent in lieu of pass dues from the British, and caused trouble only when they believed they were being defrauded. Since the last Afghan war the same arrangement has been renewed. Each tribe receives an annual payment from the British government, in return for which the pass is free to all authorized travellers on certain days in the week. There is also a modern device by which the good relation between the British government and the tribes is increased. A corps of troops called the Khyber Rifles is recruited from the tribesmen, and occupied to guard the pass on the open days and to supply escorts to caravans and travellers. The pay of the men, of course, finds its way to their villages, and the whole population grows accustomed to a sort of respect for British authority. All these arrangements are in the hands of Colonel Warburton, whose official title is "Political Officer, Khyber Pass." His position as paymaster to the tribes makes him a sort of half-recognized king. He frequently settles their disputes, and by the exercise of a delicate tact and of

an unusual personal influence has for many years kept the whole Khyber district—a thousand square miles of hills—in comparative order. The cost of the whole business—the rent-charge in lieu of dues, the Khyber Rifles, and Colonel Warburton—does not exceed 10,000*l.* a year.

It was my great good fortune when at Peshawar to be Colonel Warburton's guest, and he very kindly made arrangements to take me through the Khyber Pass himself. On Monday the 5th of December, at eight in the morning, we left Peshawar in a *ghari*, a rough two-horse cab. The road leads across a flat plain, with few trees and not much grass or cultivation. As we emerged from the shady roads of the cantonment into the open, it was a glorious, clear, bright morning, and the air crisp and cool. In front and on either hand were the mountains, encircling the plain. On the left they were low and distant; then, crossing our front, higher and nearer; and again, to the right, lower because further away. In front was a peak, Tartara, which I took to be the height of Saddleback or of Cader Idris, but it is as high above where we were as Ben Nevis above Loch Linnhe. Gradually we saw behind the low range to the north, which might be twenty miles away, a few higher and more distant summits. Then above their rims was here and there a line of snowy peaks, far, far away. We stayed a few minutes at Hari Singh, where is Colouel Warburton's official residence, the headquarters of the Khyber Rifles, in a fort, and the frontier. About ten we reached Jamrood, where there is another fort or castle of light brown mud, a caravanserai or inclosed courtyard, and a parade ground. Here the Khyber Rifles, a fine body of men in khaki uniform with knickerbockers, were being inspected by their commanding officer, Lieutenant-Colonel Aslam Khan. Aslam Khan is an Afghan prince of the Saddozai family, i.e., the royal family that reigned before the present Barakzai dynasty. He has passed most of his life in the British service, and

has for some time commanded these border levies. His fine, soldierlike appearance and courteous bearing make him a favorite with the British of Peshawar, and it was a pleasure to learn that he would accompany us to Landi Kotal. At Jamrood we were joined by a third Englishman, Mr. Walton, and found waiting for us an escort—a native mounted officer and two or three troopers—horses for the colonels, and dogcarts (called *tum-tums*) for the English travellers and their native servants. The baggage had been sent forward on mules, and we started almost immediately. From Jamrood the road rises very gently for about three miles, over a belt of undulating ground at the foot of the hills. It leads into a deep bay in the mountains, at the end of which the ascent begins. In a few minutes we were winding our way through the most rough-and-tumble hills I had ever seen. The strata stood bolt upright, the hills being carved out of them. The road, which is well laid out and has a regular ascent without extravagant windings, mounts steadily for three or four miles, when it emerges on to an irregular ridge, the margin of an airy upland plateau, wild and broken, shut in by black, jagged hills beyond, but wide open to the sky. We looked down on a little valley at our feet, with a streamlet, a tiny patch of green, and a primitive mill. It is Lala China, the "red mill" where, in 1878, Cavagnari met Shere Ali's officer, and received the reply which was the immediate occasion of the Afghan war. We move on through the valley, and ascend for another mile or two to a second ridge, from which we see straight before us the fort of Ali Masjid. Imagine Helvellyn and Skiddaw, carded into the utmost possible ruggedness and steepness, planted facing each other, with just a quarter of a mile between, and drop into the interval a hill like the great pyramid, but steeper and twice as high, with the battlements of a fort on its flattened top; that is the first view of Ali Masjid. We descend a few yards to a hut by the stream, and find ourselves

the guests of Colonel Aslam Khan at a picnic lunch.

An hour later we are again on the road, which pierces the defile on the right of the fort. The road has been skilfully engineered, and is here cut into the mountain on the right. But in 1878 this road had not been made, and the troops had to march along the river-bed, which here for half a mile is a veritable gorge, with sides of sheer rock, in some places only about twenty yards apart. Beyond Ali Masjid the road ascends so gently as to seem almost level. It winds in a great bend round the base of a hill which fits into a bay in the opposite hill, leaving just room for the road and the stream. This form of winding glen repeats itself several times, and then the hills stand further apart, leaving between them a level plain about a mile across and three or four miles long. This wider vale is dotted with villages, or perhaps they should be called forts, of strange and striking build. Four mud walls, fifteen feet high and forty yards long, loopholed near the top, inclose a square space accessible only by a single door. At each of two opposite corners is a round tower about twenty-five feet high, also loopholed, and so built that it projects from the square. The houses, also of mud, are inside the square, which is the family fortress, the towers being placed so that men in one of them can fire along the outside of two sides of the main wall. We see in a general view about twenty of these strongholds. A rocky spur comes down from the right towards the centre of the plain, and its low extremity is crowned by a solid stone dome crumbling into ruins. Colonel Warburton tells us that it is a Buddhist "tope" of unknown antiquity. At the end of the spur, just in front of the tope, was a post of the Khyber Rifles, who presented arms as we passed. Similar posts, of two, four, or more men, were perched up at nearly all the commanding points on each side of the road from end to end of the pass. They looked pretty in their bright khaki dress, and it was a quaint sight

to see, as we did sometimes, two sentries on a pinnacle of rock five hundred feet above us. I doubt whether such tiny posts have more than a ceremonial value, but their presence on such inaccessible points proves that they are thorough mountain troops, perfect in wind and limb.

We halt for a few minutes at one village—a cluster of forts by the road—while the head man salaams to the political officer and offers us tea and bread by the roadside.

At the next village the head man's sons come out and salaam, their father being away. Colonel Warburton explains that these two villages are at feud; a few weeks ago there was a "shooting" between them, in which eight men were killed. When there is a feud the women and children and cattle are shut up in the fort, and the men crown the battlements and try to pick off any of the other side who show themselves within range. But when Colonel Warburton is in the pass there is a truce. Both sides are agreed that a little fighting is good, but that regular pay is better, and by a judicious arrangement of times there is nothing to prevent them enjoying the benefit of one and the pleasure of the other.

At one village we saw a group of women drawing water from a stone cistern with good European pipes and taps. This is a much appreciated boon. The tribes well understand the benefits of English interference when it takes the shape of a good road where there was no road, or of bringing to their doors the water which before the women had to carry for miles on their heads.

About three o'clock we came to the end of the plain, which was formed by two spurs meeting. A short defile between them led to a second plain, lying across instead of along the road, and sloping up to the hills all round instead of being flat. In the middle of this hollow is the fort of Landi Kotal, an oblong rectangle three hundred and fifty yards long by two hundred and fifty wide, with high solid mud walls and round flanking towers at the cor-

ners. Up and down the plateau were villages such as we had seen already, their pale brown towers breaking the monotony of the treeless landscape.

The fort contains barracks for several companies, sheds and stabling, a covered reservoir of good water, and officers' quarters, in which our party was soon established. An hour later we strolled over to the serai, an inclosure a quarter of a mile away, smaller than the fort, with a similar mud wall. A caravan from Kabul had just come in, and the great square was crammed full with a noisy crowd of men, horses, camels, mules, and donkeys, infinitely dirty. There was a guard of Khyber Rifles at the gate, and the crowd inside, though noisy, was not disorderly. The officers of our party talked in Persian and Pushtu to some of the wayfarers, who came from various parts of central Asia, from Samarkand, Tashkend, Balkh, and Kabul. Mr. Walton was anxious to buy the wooden bowl used to mix his rice by one of the Turkestan men, who had at first refused to sell it, then demanded many rupees, and when at last he had handed over his bowl and received one rupee, threw it into the air with a loud triumphant shout, "Allah Akbar!" We went back at sunset to our quarters in the fort.

Next morning we were up in good time, and set out to walk to the Afghan end of the pass. From the fort the plateau of Landi Kotal seems to be shut in all round by hills, but following the road for a mile or two we found it dropping behind a spur into a huge winding gully, a sort of tunnel or ravine down which in rainy times a torrent pours. The engineers have skilfully traced the road round the sides of this great drop so as to have a uniform and practicable gradient.

After walking down for a mile or two we came out on to a spur from which could be seen the end of the pass. The ravine was not wide enough even here to admit of a free view right and left, but the glance at Afghanistan through the V-shaped opening was a sight not to be forgotten. We sat on an irregu-

lar pinnacle of rock standing up from the ravine, which it half filled up. On our left was the dreadful gorge of the torrent, and across it the rugged slopes of mountains that rose five thousand feet above its bed. These hill slopes limited the view on one side; and similar slopes shut it in on the other. Deep down at our feet was Landi Khana, the foot of the pass; then, seen across a small patch of the plain, a stormy sea of mountains.

We walked back to the fort and spent the morning exploring the plateau. In the afternoon we ascended Mount Pisgah, one of the hills forming its western margin, and overlooking the vale or plain of Jellallabad. Here we saw beneath us the whole valley from Dakka, where the Kabul River enters the Khyber range, to the hill behind which lies hidden the town of Jellallabad, fifty miles away. The river could be watched for many a mile, its slender thread of water seeming insignificant in its broad, stony bed. The plain stretched far into the distance, level like a calm sea, with rocks and hills jutting up through its surface. Beyond them were irregular ranges of hills, backed in turn by mountain ranges one behind another, and on the left, above the last dark mountains, the delicate pearly saw-teeth of a snowy range, faint and spectral in the dim distance. To the right, partly hidden by the rocks beside us, a giant roof of pure white snow stood up into the sky. At its feet was a mountain range seen above nearer lines of hills, so that three great valleys lay between us and the peaks that bore that vast expanse of snow.

Late at night, when all my companions had gone to bed, I went out on to the parapet of the fort. In one of the towers stood, silent and motionless, the Pathan sentry. The moon had set, but in the starlight I could see the vale of Landi Kotal, with its lovely rim of mountains rising, jagged and broken, against the blue sky, and one great peak outside looking down at me over the rim. In the still sky the innumerable stars sparkled with unwanted brill-

liance, and as I looked up at Jupiter and Orion I thought that five or six hours later the turning earth would show these stars to eyes at home. How gladly would many an Englishman, exiled half across the globe, give his message to some star which might shine it down when passing England later in the night ! The Englishman who stays at home too easily forgets that India is a great way off. Perhaps because it is so far away many have forgotten it altogether.

Next day we returned. Across the plain of Landi Kotal, along the plain of the Buddhist tope, and through the winding defiles I drove in the *tum-tum* ; through the gorge of Ali Masjid I walked by the river-bed ; and down the descent from Ali Masjid to Jamrood I rode with Colonel Warburton, following for part of the way a bridle path, which is shorter than the carriage road. At Jamrood we said good-bye to Aslam Khan, and drove into Peshawar.

The Khyber Pass is no longer a hindrance to movement. Thanks to the British engineers, whose road is excellent, having no grade steeper than one in fifty, a lady's brougham can drive from Peshawar to Landi Khana. In a military sense the pass is difficult. The gorge at Ali Masjid and the defile beyond could be held for a long time by a small force against an army. Sir Sam Brown, in 1878, failed in his front attack, and the turning movement which caused the Afghans to retire would not have succeeded against a vigilant defender. There is a track over the hills to the north, sometimes called the Tartara Pass, but it would not serve for a large force, and could easily be defended. To the south of the pass the parallel Bazaar valley offers an alternative route, but it is accessible from the Jellallabad basin only by crossing a high ridge, and ought not to be available against a wideawake opponent. A vigorous defence, with the tribes in its favor, would close the Kyber range against any advance in either direction.

From Peshawar to Jellallabad is

eighty miles, and from Jellallabad to Kabul another ninety miles. Every mile that the railway could be carried beyond Peshawar would bring India, in every sense, nearer to Kabul. The goods which, at present, are carried one hundred and seventy miles by camels and mules, would be indefinitely multiplied when drawn by the locomotive. The clans to whom the British are strangers would get to know them and become friendly. The ameer and his people would have a better chance of understanding the Indian government. These advantages are appreciated in India, and the Khyber country has been reconnoitred for a railway line. The pass is not a good route, as a descent to Landi Khana is too steep for any railway. But modern engineers would make a line along the gorge of the Kabul River, which pierces the range, and by following its course an excellent route can be obtained, free from floods, with no gradients above one in two hundred and no extravagant tunnels. The rails once laid to Dakka, could be carried on along the plain without difficulty to Jellallabad.

The peculiar situation of Jellallabad must be borne in mind. The stupendous hills which I saw from Mount Pisgah are the northern wall of the Jellallabad basin, an irregular wall formed by the ends of great ranges running down from the north, but yet an effective barrier, which no army, Afghan or British, and hardly any traveller has yet crossed. The southern side of the basin is not visible from Pisgah ; it is a straight wall of mountains (the Sufed-Koh) from twelve thousand to fifteen thousand feet high, without a break. At its western end the valley is crossed by north and south ranges twice as high as the Khyber range, and the few passes through them are incomparably more formidable than the Khyber. It was in these terrible defiles that the British army retreating from Kabul was destroyed in 1842, a disaster that, strangely enough, is traditionally known as the "Khyber Pass massacre."

Some of my friends in India think that the best plan for the defence of the north-west frontier would be to hold a fortified position on these hills, connected by railway from Peshawar. Such a position would be the gate of Afghanistan. A British force there would be two or three marches from Kabul, the centre of Afghan life and trade and the nucleus of all the communications in the country. Nothing could be better, provided the Afghans were agreeable. But they would hardly accept quietly such a state of things, though it might have been forced upon them after a crushing defeat. The Jellallabad valley is peopled by the most turbulent of the Pathan clans. The railway would be almost at their mercy. For this policy, therefore, the first requisite is to secure the allegiance of these clans. A man like Colonel Warburton might accomplish this, if he were given a free hand and supported.

At present such men are kept in leading-strings, or rather are held on the curb; not by the Indian government, which appreciates them, but by the Punjab government. Incredible as it may seem, the political agent for the Khyber is in no direct relation with the Indian government, but reports to and receives his instructions from the government of the Punjab. This is a most unfortunate arrangement. A local government has its attention properly concentrated upon the internal affairs of its province, and has neither the money nor the staff available to deal with a frontier policy. When times are quiet the local government can carry on the correspondence, but when an important issue presses the matter must be referred to headquarters, and the intermediate authority is a cause of delay. Moreover, no local government can properly be the judge of questions of external policy. There has been much discussion between Indian officials concerning the distribution of authority on the frontier. The question cannot be fully examined in relation to the Khyber district alone, but no account of the Khyber would

be complete which did not take note of this thorny controversy.

It is hardly conceivable that the railway should not at some time be carried on to Kabul itself. This appears to be the consummation which the Indian government should keep in view. A railway to Kabul will, sooner than any other agency, break down the isolation of the Afghans and efface the memory of the unhappy conflicts which have estranged them from the British. It would also enable the Indian government to render them effectual help for the defence of their country, in case they should need and desire it. The dislike for the railway is at present cherished partly by the ameer, and still more by the mullahs, who dread European influence as dangerous to their own ascendancy. The common people are by no means absolutely biased against the railway, or even against the British. If the line were carried to a point just outside the ameer's territory at Dakka, and the Khyber tribes employed in its construction and working, and their subsistence provided for, the mere saving of time and trouble to the *kaflas*, or caravans of traders, would advertise the advantages of the iron road to all the population of the Jellallabad and Kabul regions.

In these countries, too, it should not be forgotten, the railway of itself brings most of the benefits and avoids most of the evils of annexation. It Europeanizes or Anglicizes the country.

SPENSER WILKINSON.

From *The Fortnightly Review*.
THE ELECTRIC FISHES.

IN these days, when electrical phenomena are commanding universal attention, and when electricity is becoming, in a thousand ways, the servant of man, there are no animals more worthy of attention than the electric fishes, a group known to have the power of giving electrical shocks from specially constructed and living electrical batteries. Although some of these fishes have been known from

early times, even from the days of the Pharaohs, it is only within the last ten or twelve years that the structure of the batteries has been carefully examined with the highest powers of the microscope, and with the best histological methods, and that the phenomena of the living batteries in action have been studied in the physiological laboratory with the most refined methods of research. These investigations, carried on notably, as regards structure, by Fritsch, of Berlin, and, as regards mode of action, by E. du Bois-Reymond and Sachs in Germany, and by Burdon-Sanderson and Gotch in England, have brought to light many details of one of the most remarkable organs in the whole realm of nature. Here we find an electric organ, more or less powerful, constructed apparently without insulators, regulated by the nervous system, and under the control of the animal ; and, more remarkable still, it is found to be an organ not constructed on a new type for the production of electricity, but a modification of simple elementary tissues, which, in other animals, manifest only feeble electrical properties.

About fifty species of fishes have been found to possess electrical organs, but their electrical properties have been studied in detail only in five or six. The best known are various species of *Torpedo* (belonging to the skate family), found in the Mediterranean and Adriatic Seas ; the *Gymnotus*, an eel found in the lagoons in the region of the Orinoco, in South America ; the *Malapterurus*, the rāash, or thunderer-fish, of the Arabs, a native of the Nile, the Niger, the Senegal, and other African rivers ; and various species of skates (*Raia*) found in our own seas. It is curious that the Nile is rich in electrical fishes, several species of pike-like creatures (*Mormyrus* and *Hyperopisus*) possessing electrical organs the structure of which has been quite recently investigated by Fritsch. The electrical fishes do not belong to any one class or group, and some are found in fresh water, while others inhabit the ocean.

Two distinct types of electrical organs exist. One is closely related in structure to muscle, as found in the *torpedo*, *gymnotus*, and *skate*, while the other presents more of the characters of the structure of a secreting gland, as illustrated by the electric organ of the thunderer-fish. Both types are built up of a vast number of minute, indeed microscopical, elements, and each element is supplied with a nerve fibre. These nerve fibres come from large nerves that originate in the nerve centres — brain, or spinal cord — and in these centres we find special large nerve-cells with which the nerve fibres of the electric organ are connected, and from which they spring. We may, therefore, consider the whole electric apparatus as consisting of three parts : (1) electric centres in the brain or spinal cord ; (2) electric nerves passing to the electric organ ; and (3) the electric organ itself. It must not be supposed, however, that the electricity is generated in the electric centres, and that it is conveyed by the electric nerves to the electric organ. On the contrary, it is generated in the electric organ itself, but it is only produced so as to give a "shock" when it is set in action by nervous impulses transmitted to it from the electric centres by the electric nerves.

Keeping these preliminary notions in mind, we will now examine more minutely the structure of individual electrical organs. Take, first, the muscular type. The organs of the *torpedo* are two large, kidney-shaped masses placed, one on each side, near the head and gills. Each organ is composed of about eight hundred prismatic columns placed, side by side, vertically between the integuments covering the back and belly, and, in a full-sized fish, each prism contains about six hundred plates or diaphragms placed transversely, and separated from each other by a jelly-like albuminous fluid. There are thus about five hundred thousand plates in each organ, or about one million in the two. Each plate, which may be called an electric plate, consists of several layers, but the most remarkable

layer is one composed of finely granular matter (electric tissue), raised on one side into finger-shaped projections. Further, each electric plate is supplied with a distinct nerve fibre, which, entering its under surface, splits up there into still finer fibrils, which end in the electric tissue. This powerful electrical battery (which is something like an old-fashioned voltaic pile, consisting of discs of metal, zinc, and copper, separated by diaphragms of soft cloth or bibulous paper) is supplied with no less than five large nerve trunks, which spring chiefly from a large lobe of the brain near its base. In this lobe we find large, somewhat globular, ganglionic nerve-cells, each about one one-thousandth to one fifteen hundredth of an inch in diameter, and each of which is the starting-point of a nerve filament, which breaks up into numerous finer filaments, and these ultimately end in the plates of one of the prisms of the electrical organ.

The organs of *gymnotus*, the eel, are four in number, two large and two small, running on the under surface from the pectoral fins of the fish to near the end of the tail. Each organ is like a series of long trays running lengthways in the fish, and placed one above the other, and each tray is divided into compartments by a large number of parallel partitions placed vertically. Unlike that of the torpedo, however, each partition is not single but double, and it may be regarded as a pair of partitions with a fluid intervening. Between the partitions we find an electric plate as in the torpedo, but more complicated in structure. Composed of electric matter, the anterior surface is covered with a number of long projections or papillæ; the middle of the plate is either transparent or shows a thin, dark line, and the posterior surface is also thrown into papillæ, in which the electric nerves terminate. The electric plates of the eel are larger and wider apart than those in the torpedo. Thus we find about thirty plates to each millimetre (one twenty-fifth inch) in the torpedo, while there are only ten to the milli-

metre in the eel. The number of trays in each organ is difficult to determine, but it may be taken as about forty in the larger organs and ten in the smaller; and as there are two organs on each side, a larger and a smaller, the total number of trays is about one hundred. Each tray contains, on an average, about eight hundred plates, so that the whole battery contains upward of eighty thousand plates, each of which is supplied by one or more nerve filaments. These organs are supplied by over two hundred pairs of nerves coming from the motor roots of the spinal nerves. While the nerve cells in the nervous system of the torpedo are located in one organ, the electric lobe, those of the *gymnotus* occur throughout the greater part of the length of the cord. No special cells connected with the electric nerves occur in the brain, but they surround the central canal of the spinal cord, forming a kind of cylinder open at each end. From each cell a fibre issues which ultimately finds its way, in an electric nerve, to the electric organ. Both in the torpedo and in the *gymnotus* these nerve cells are modifications of groups of nerve cells found in the cores of other animals, from which fibres issue for the supply of muscles.

In 1844, Dr. Stark, of Edinburgh, discovered two peculiar organs in the tail of the common skate (*Raia*) which he conjectured to be electrical. These were examined microscopically by Goodsir, who gave a fair description of their structure. In 1847, they were described by Robin, and in recent years more minutely by Cossar Ewart and Carrington Purvis. On each side of the spinal column, about half-way up the tail, we find two elongated bodies, tapering at each end. Each is made up of a longitudinal series of discs, placed vertically, so that the flattened surfaces point to the head and tail of the animal. On the side of the disc pointing to the head there is a structure remarkably like the electric plate of *gymnotus*, a granular matter raised into papillæ, and into the posterior sur-

face of the papillæ the nerves penetrate. The electric organ of the skate, contrary to what one might have expected, resembles that of the electric eel and not that of its congener, the torpedo.

The electrical organs above described are all modifications of muscle. It is not implied in this statement that they are muscular at any period in the life of an individual, but rather that they are developed from an embryonic tissue which somewhat resembles muscle, and which is developed into muscle in allied fishes. Thus it is well known that a young torpedo passes in early life through three stages. First it resembles the young of a shark, next a common ray or skate, and lastly, and in consequence of the formation of the electrical organ, it becomes a true torpedo. At an early stage, the tissue in the position of the electrical organ is like that of embryonic muscle, and may even show a faint striation. Somewhat later, the muscular appearances fade away, and the disc-like arrangement of the electrical organ becomes apparent. The outer gill muscles in ordinary rays and sharks are powerful organs for the movements of the lower jaw, but in the torpedo these jaw muscles are absent, and in their place we find the electrical organ. In like manner, the muscular nature of the organ in the *gymnotus* becomes apparent when it is examined at an early stage in development. The same is true of the organ in the skates. Here transitional forms have been found by Cossar Ewart, in which the gradation from muscle into electrical organ, or the reverse, can be traced. To understand the significance of this fact, we must bear in mind that muscular tissue itself, in the striated variety that constitutes the voluntary muscles of the limbs and trunk, is built up of light and dark discs alternating, and all enclosed in a sheath. It is not necessary here to give in detail an account of recent researches on the minute structure of muscle. Suffice it to say that careful research shows it to be very complicated. Many muscle-fibres

— not all — are supplied with a nerve filament which pierces the sheath and terminates in a peculiar granular structure of irregular form, known as an end-plate. Physiologists have strong grounds for believing that the end-plate is a structure forming the connecting link between the terminations of the nerve and the contractile muscle substance, and the changes excited in it by the nerve impulse in some way stimulate the muscle substance, causing it to contract. That the end-plate is something different both from the nerve and from the muscle substance is proved by the fact that it may be paralyzed by certain poisons, notably by urari, without either the nerve or the contractile protoplasm of the muscle being affected. A consideration of these facts at once suggests the question whether or not the electric discs are enlarged end-plates. If an electric organ has been slowly developed through the ages from striated muscle, we can readily suppose that the contractile substance became less and less in quantity while the substance of the end-plate increased. As this process went on, the structure would become less and less contractile and more and more electrical in character, until contractility disappeared and only electrical phenomena remained. If electric discs are only modified end-plates it is a curious fact that they are not paralyzed by urari, a fact, however, not entirely contradictory. Close observation on the effects of poisonous substances on living structures shows that a very slight modification of the chemical nature of the structure may modify the action or even neutralize it, so that the structure cannot be influenced by a poison which at one time seriously affected it. This fact is illustrated by the various pathological phenomena coming to light in these days, in which by the inoculation of certain poisons in a diluted and modified condition, the tissues can be protected from the deadly action of the poison in a more virulent form. It may, therefore, be conceived that, during the gradual evolution of an end-plate into an electric disc, slight

modifications occurred in it which made it insusceptible to the action of urari.

It is a common observation that nature often modifies different parts for the same purpose, or similar parts for different purposes. Thus the tendrils by which a plant clings to other structures may be developed from leaves, stipules, or even branches ; and, on the other hand, similar parts in many of the Crustacea may become either gills for breathing or feet for walking. It is not surprising, therefore, that electric organs occur that are not muscular in their origin. This is the case in the thunderer fish of the Nile. In this animal the electric organ forms a layer beneath the skin, enveloping the body with the exception of the head and fins. Its structure, as worked out chiefly by the laborious researches of Professor Fritsch, is that of a honey-comb-like tissue, in which, however, the spaces are not hexagonal, but lozenge-shaped. Each lozenge has, of course, four sides, and on two of these, adjacent to each other, we find an electric tissue consisting of granular protoplasm, and not unlike that of the electric discs in the other fishes. Fritsch regards this electric tissue as a layer of modified epithelial cells. The electric organ, therefore, is an altered condition of the skin glands. In the epidermis of the thunderer there are peculiar club-shaped cells, which are forms transitional into true electric cells, and, towards the tail, lozenge-shaped spaces occur in which there is no electric tissue. The number of these electric cells is enormous. After counting the number in one cubic centimetre of the organ (a cube, each side of which measures two-fifths of an inch), Fritsch computes the total number in the organ of a full-sized fish, and brings up the total to two millions. Each electric cell is supplied with an individual nerve filament which enters the lozenge at one angle and loses itself in the electric tissue. These filaments are formed by the division of larger ones, and, strange to tell, when the filaments of one side of the body are traced inwards to the spinal cord, they are all

found to spring from one single nerve filament which originates in a single gigantic nerve cell. This nerve cell has numerous protoplasmic processes which coalesce here and there to form a perforated plate, in the meshes of which capillaries may be seen. These giant electric cells, of which there are two lying side by side, one in each lateral half of the cord, and connected by a filament passing across the cord, are about .008 of an inch in diameter. We have thus the whole electric organ supplied by two nerve cells, a fact unique in science. Further, the electric cells of one half of the body are each supplied by a nerve filament, that is to say, there are, in the periphery, one million individual filaments. These, however, all spring from one nerve filament, starting from the electric cell. Fritsch, with praiseworthy zeal, measured the diameter of the parent nerve filament, and compared it with the sum of the diameters of the million of filaments in the periphery. He found that the ratio was as one is to three hundred and sixty-four thousand, showing the remarkable fact of a gradual increase in the amount of matter forming the axis cylinder (the central part of a nerve fibre), as we pass from the spinal nerve cell to the ultimate nerve fibril. The single electrical cell, little more than .01 of an inch in diameter, can thus discharge the whole battery on one side of the body.

We are now in a position to consider some of the more remarkable phenomena of these fishes. The electricity evolved from their batteries is, it need hardly be said, of the same nature as the electricity produced by any of the appliances now in common use. It produces, to a greater or less extent, the same physical and chemical phenomena. When a living electric fish is touched, it may or may not emit a shock, and it soon becomes evident that it is under the control of the will of the animal. Just as the fish can voluntarily flap its fin, so it can give an electrical discharge. It can also vary the strength of the shock, but it has not been clearly ascertained whether it can

discharge a portion of its battery, a single gun, or whether it must fire a broadside at once. The strength of the shock varies in the different fishes. The strongest is that of a full-sized *gymnotus*, which may in certain circumstances cause a man to stand out rigid like a tetanized frog; next comes the thunderer, which gives, for its size, very powerful shocks from its "electric great-coat" (as Professor Fritsch amusingly terms it); the shock of the torpedo is comparatively weak, although favored by the good-conducting sea-water in which it swims; and the weakest is that of the skates, which cannot be felt but is readily detected by a galvano-meter, or by the "click" of a telephone. If the brain be destroyed, so as to remove the power of voluntary movement, and the electric centres be irritated, discharges are given off by the batteries. The same result, although less intense, follows irritation of the electric nerves. It is remarkable that a voluntary discharge is more powerful than one artificially excited, showing that the organ responds best to the excitatory processes in the nerve centres. Discharges are also given by stimulating the skin or any sensory nerves of the fish. These are of a reflex character, like the movements following tickling the foot of a sleeping person.

The analogy of an electric discharge to a muscular contraction has been strikingly worked out in the physiological laboratory. It is well known that a muscle may either give a single short contraction, a twitch, as it is termed, or it may remain for a time in a contracted state, as in tetanus, known by the more familiar name of cramp. A single stimulation of the nerve supplying the muscle is followed by a single twitch; but if the stimuli follow each other in rapid succession, say twenty or thirty in the second, then the muscle hardens itself up into the state of tetanus. In other words, there is a summation of the effects of individual stimuli. Further, there can be no doubt that the voluntary muscular contractions excited in locomotion, or in

the movements of my fingers in writing these words, are not simple twitches but are really tetanic; and it follows that the nervous influence that excites contraction must emanate from the nerve centres, not as a continuous stream, but as a number of impulses emitted at the rate of thirty or forty in the second. The discharge of an electric organ, similarly, is not like a continuous flow of electricity, but it is composed of a number of discharges, rapidly following each other. When the organ in a torpedo is active, the discharges may be as numerous as two hundred in the second; as the nerve centres become weaker from exhaustion, the number falls, until there may be only one or two shocks in the second. Several other points of similarity to the behavior of a muscle are of great interest. To appreciate these let us endeavor to imagine the order of the phenomena when a torpedo voluntarily gives a shock. In the first place, impulses pass from the brain (the volitional centre) to the electric lobe (the electric centre). Changes are there produced in the electric cells, and impulses are sent out from these at the rate of, say, one hundred and fifty per second along the electric nerves. These impulses pass along the nerves at the comparatively slow rate of fifteen to twenty feet per second, and when they reach the electric organ they then set up chemico-physical changes, which occupy a latent period of from one '01 to one '02 of a second. Then the electric organ gives a rapid series of shocks corresponding to the number of nervous impulses; as the nerve centres become fatigued, the shocks become fewer and fewer in number until they disappear; or the fish may voluntarily stop the discharges just as it may cease to make any voluntary movement. The electric organ is subject to fatigue, and exhaustion may involve either the nerve centres, or the electric organ, or both. If the electric organ tires, the latent period becomes longer and longer, a fact precisely similar to the phenomenon in a muscle. Finally, the organ develops acid just as

a muscle does, and in all probability it uses up oxygen and produces carbonic acid and other waste products. Allow it to rest and it quickly recovers, and is ready for another series of discharges. The chemical phenomena occurring in electric organs have not yet been studied with sufficient minuteness to enable us to make more definite statements. A small amount of heat is generated in the active state of the organ, a fact I have been able to demonstrate on the skate.

There can be no doubt that the electricity is developed in connection with chemical processes occurring in the electric plate in which the electric nerve filament ends. Pacini showed long ago that the nerves are always distributed to the side of the electric plate which becomes negative in the discharge. Thus, in the torpedo, the ventral surface of each plate becomes negative to the dorsal surface, and as there are many plates in each prismatic column, the effect is summed up so that the dorsal end of a column becomes positive to the ventral end. In the torpedo, therefore, as the nerves are in the lower plate the currents pass from the belly to the back; in the *gymnotus* the posterior surface of the plate is negative, and therefore the discharge is from the tail to the head; and in the thunderer fish the negative side of the organ is anterior, and thus the current passes from the head to the tail. Now it need hardly be pointed out again that the electricity is not generated in the central nervous organs, nor in the electric nerves; it is produced in the electric discs in response to nervous impulses. The battery is not charged by the nerves as storage cells are charged by a dynamo; but the nervous impulses, in all probability, set up changes in the electrical matter which produce in it differences of potential, and these differences accumulate and are added together until a full discharge is let off. Professor Gotch has made the remarkable discovery that the organ may be excited in a secondary way by its own discharge. Strong, healthy torpedoes, in the summer,

when excited by one irritation, gave not only a first discharge, but also, in quick succession, a second, third, fourth, and so on, at intervals of about one-hundredth of a second, each successive shock becoming weaker than the one before it. As all these responses produce currents directed through the columns of the organ, each column, during its activity, "must reinforce by its echoes the force of the primary explosion, both in its own substance and also in that of its neighbors."

Currents of electricity can be detected in an electric organ during rest. These pass in the direction of the current when the organ is active. Thus, in the torpedo, on applying the cushions of the galvanometer to the dorsal and ventral surfaces, after the electric lobe has been destroyed, so as to remove voluntary action, a current can be readily detected by the galvanometer. Even if bits of the organ are connected with the galvanometer, currents are found, but these currents are remarkably small, less than those obtained from the tissues of frogs. Thus the electro-motive force between the longitudinal and transverse section of the gastrocnemius muscle of a frog is about '03 of a Daniell's element, and between the longitudinal and transverse section of a sciatic nerve about '02 of a Daniell.¹ As regards the electric organs, Sachs obtained from bits of the organ of a *gymnotus* 40 mm. long (1½ inch), an electro-motive force of from '015 to '03 of a Daniell, while with strips of the organ of a torpedo, each about 20 mm. (½ inch) in length, Du Bois-Reymond obtained only '0085 of a Daniell. Double this would be '017, thus still a little less than a similar bit of the organ of a *gymnotus*. Du Bois-Reymond gives the electro-motive force of a single plate of a *gymnotus* at '00006 of a Daniell, while that of a torpedo, at only '0000117 of a Daniell, or about one-third of that of a *gymnotus*. Remembering that the torpedo is a sea-water fish, while the *gymnotus* inhabits

¹ The electro-motive force of a Daniell's element is one volt.

fresh water, it is remarkable that the ratio of the electro-motive forces in the two fishes is almost the same as that of the resistance of fresh water to salt water; in other words, the electric organ of the fresh-water fish has a higher electro-motive force than that of the sea-water fish because it has a higher resistance to overcome in discharging its shocks.

It is difficult to determine the electro-motive force of the discharge of the whole battery in any of the electric fishes. Comparatively small when the organ is at rest, it rises rapidly under the stimulus of nerve impulses. Thus, if we take the force of a single plate of the torpedo as .0000117 of a volt, the total force of the organ is about twelve volts; but at the moment of discharge it will be much increased. Again, in a full-sized *gymnotus* we have about eighty thousand plates, each having a force at rest of .00006 of a volt, or in all only 4.8 volts, but, at the moment of discharge, it must rise to something like three hundred to eight hundred volts. As an explanation of the highly irritating effect of these discharges, we must bear in mind that the battery is constructed of small elements, and that the individual shocks are of short duration. The shocks, unlike those of an induction coil, are always in one direction. The effects are, indeed, comparable to those produced by very rapid interruptions of the current of batteries composed of many small plates. It would have been interesting, with reference to this question, to have studied the physiological action of the celebrated chloride of silver and zinc battery of the late Mr. Warren de la Rue, in the Royal Institution of Great Britain, which consisted of eleven thousand pairs of plates.

From the electrician's point of view it is remarkable that the batteries of the electric fishes are constructed without the use of any insulating arrangements. Even the body of the fish is not protected from its own currents, and these pass in greatest density through the brain and spinal cord. Du Bois-Reymond has endeavored to show, by

a number of beautiful experiments and ingenious arguments, that the resistance of each of the prisms of the torpedo is greater in the downward than in the upward direction, and as the currents in this fish pass into the surrounding medium from the back to the belly, the effect of this arrangement is that the density of the total current into space is increased. Each column conducts its own upward current, but offers resistance to the downward currents of all the rest, and consequently the downward currents are forced to pass into space round the edges of the organ, as if each prism were surrounded by an insulating substance. This will be understood if we make a model of the organ by using a number of bobbins of thread, each standing on end in a basin of salt water. Imagine a current flowing through each bobbin from the table upwards, and that this current, on issuing from the upper end, bent round and went back to the table along any adjacent bobbins, or between them. Suppose now, that this current met with greater resistance in its passage downwards in a bobbin than in passing through the water round the edge of the group of bobbins to the table. It is clear that, in these circumstances, the current would pass out through the water, and might be more effectively employed than if the whole or part of it simply returned to the table by the nearest bobbins. This resistance to the downward passage of a current would have the same effect as if each bobbin were surrounded by an insulator which would prevent the downward passage of the currents. Such a rough illustration may help to the comprehension of the important part played, according to Du Bois-Reymond, by the "irreciprocal" conduction of the prisms. It is only right to mention that this explanation has been adversely criticised by Professor Gotch, but it is so beautifully simple that one almost hopes it may pass scatheless through the criticism.

I shall allude to only one other point of great interest, namely, the immunity of the fishes to their own shocks. As

already pointed out, the greatest density of current in the torpedo is through the brain and cord of the animal. Now, we know that nerves are irritated by electrical shocks; how, then, is it that when the fish gives a shock it is not apparently affected, either as regards sensation or muscular movement? One would have imagined that at the moment of a discharge, the body of the fish would have become convulsed. The only explanation seems to be that the lower limit at which excitation of a nerve occurs, when affected by electric shocks, is higher in electrical fishes than in other animals. Suppose we sent a shock from an induction coil to a nerve, the shock might be too weak to produce any physiological effect, and we would only obtain indications of sensation or of motion after increasing the intensity of the shock to a certain level. This level may be termed the lower limit of excitability. Then imagine that, by long habit, the nerves become so altered as to require stronger shocks to affect them. The result would be a raising of the lower limit. This appears to be the case with the electrical fishes. Du Bois-Reymond found that induction shocks from a coil, having two Grove's elements in the primary circuit, killed or rendered unconscious such fishes as tench, chub, pike, and silurus, and the same current tetanized frogs, while a malapterurus was apparently unaffected. When the induction shocks were made much stronger, the fish noticed them, "but if it came in the neighborhood of the electrodes, where the current density was greatest, it withdrew hastily, gave a shock or two, and sought, with correct instinct, that position in which its axis of length cut perpendicularly the least dense current curves, *as if it knew* the laws of the distribution of currents in non-prismatic conductors." A constant current from thirty Grove's cells did not appear to seriously inconvenience the fish, but here also "it sought the position which theoretically was the most protected." One would suppose from these observations that the fish had learned to recognize the

shocks of its brethren by the experience of combats in which the weapons were not teeth, as in other fishes, but electric batteries. Still, the fact remains that the fish, while giving broadsides of electricity sufficient to irritate or possibly stun its opponent, does not suffer from the irritating effects of its own discharges, although these pass through sensitive parts of its body. Strange, too, that the little thunderer should know how to place its body so as to get the least injury from the discharges of an enemy. This is in keeping with the well-known fact that the electric eel also acts like an experienced electrician in curving its body towards its victim and discharging the shock to the greatest advantage by touching it with the nose and tail.

In few departments of physiological science can we find a more striking example of organic adaptiveness than in the construction of the electric fishes. In these animals we have specialized organs for the production of electricity on an economical basis far surpassing anything yet contrived by man. These organs are either modified muscles or modified glands, structures which, in all animals, manifest electrical properties. Any imitation of these organs will be, as Du Bois-Reymond remarks, the outcome of the "profoundest reflection of a clever brain." The problem, however, of the evolution of electric organs is the same as that confronting us when we trace the growth in the animal world of any organ of sense, or, for that matter, of any organ in the body. Slowly, and by imperceptible gradations, each of which was in the interests of the race, organs have been adapted for the evolution of electricity, and constructed in consonance with the known laws of electrical action. Probably also their mechanism involves laws of electrical action at present unknown to the physicist, and they may serve as guides to the invention of better appliances for the production of electricity than any now in use. Thus the study of the emission of light by the brilliant firefly, or by the more humble glow-worm,

and the manifestation of electricity by the electric eel, is not only fascinating in itself as an intellectual exercise, but it may be of economic importance to mankind.

JOHN G. MCKENDRICK.

From The Gentleman's Magazine.
LIFE IN MODERN EGYPT.

THE visitor to Egypt cannot escape the impression that it is a place of contrasts, anomalies, and inconsistencies. The contrasts are chiefly material, and are more conspicuous to the outward eye. The anomalies and inconsistencies are for the most part social and political, and are more apparent to the inward eye of reason and reflection. It is in the great cities that the most striking contrasts exist, and of these the most obvious are displayed upon the visages and the vestments of the people. There are few places in the world so cosmopolitan as Cairo and Alexandria. We may say of them as Herrick said of London : —

O place ! O people ! manners, framed to please ;
All nations, customs, kindreds, languages.

And the reasons are not far to seek ; for in the first place Egypt is the gate between East and West, the highway through which there flow in endless succession two streams of travellers, one going to meet the rising and the other the setting sun. It is there that the Englishman on his way to India obtains his first glimpse of Oriental life ; it is there, too, that some wealthy Indian prince or merchant, intent on a European tour, begins to feel that he is at last leaving the East behind him, and that he is on the threshold of another land. Then again the personal inaptitude of the native Egyptian for trade has attracted a crowd of eager competitors from Europe to occupy the place he cannot himself fill. Greeks, Italians, French, Englishmen, and many others swarm in the market-place and the bourse. The more slow-witted Egyptian has no chance in the race.

Most of the principal shops and places of business are occupied by foreigners, and they notify their calling to the world not uncommonly in three or four languages. There is a positive Babel of tongues. And as the tongue and face vary so does the dress ; and there passes before the eye a kaleidoscopic panorama of human life. And in Cairo particularly there is another striking element of contrast. While Alexandria has become so much Europeanized that it has entirely the aspect of a Western city, Cairo, on the other hand, consists really of two cities, which insensibly blend into one another. There is the European quarter with its fine shops, its magnificent hotels, its churches and its broad and pleasantly shaded boulevards. And there is the equally extensive native quarter with its narrow and tortuous ways, its bazaars and its mosques. Within a short walk of Shepheard's Hotel, with its electric light and all the modern conveniences of civilization, there teems a population which in spite of the slow and continuous infiltration of Western ideas is still, in the main, the same in manners, customs, and thoughts as when Lane described them more than half a century ago. The characters in the "Thousand and One Nights" may be almost imagined to step out of their setting of words, and to take form and glow with the generous warmth of life before one's very eyes. The natives still drink the same coffee and out of the same cups ; they smoke the same pipes ; they wear generally the same dress ; they play the same primitive instruments that whisper the same strange and plaintive tones ; the funeral processions wend their way along the streets as of old ; the popular festivals or moolids are still observed with the same untiring capacity for enjoyment ; the public reciters still practise their profession before admiring crowds ; the water-carriers still carry their burdens so welcome to thirsty lips ; except in the houses of the rich and thoroughly Europeanized, food is still eaten with the fingers, and in the same manner, and the hands are

washed with the same basins and ewers ; the mosque of El-Azhar still attracts its crowd of students. Even the old wooden locks and keys are still in use, and the water jars are still kept cool in the lattice-work of the overhanging mushrabiyeh window-frames. Instances of this sort might be multiplied a hundred-fold. It is indeed a wonderful change and contrast that is presented to the eye when you leave the European and enter the native quarter. And the mind and feelings turn in unison and become attuned to the changed scene. The sense of taking part in a new and different life steals over you, and you temporarily throw off your affinity with the West and the nineteenth century. The clock of time is for the moment put back for you.

Another contrast in Egypt is presented by the population of town and country. Whereas the fellahs or peasantry physically resemble the type of the ancient Egyptians as depicted on the monuments, the population of the towns has become too mixed to retain its old characteristics. And this brings us to another contrast which is strongly marked in Egypt. This is the contrast between past and present, old and new. The very ancient and the very modern positively jostle one another. This is apparent even at Shepheard's Hotel ; upon the balcony of this magnificent new building are two sphinxes, reputed to have been discovered by M. Maspero at the Apis Mausoleum at Sakkarah. And right under the Pyramids, and almost within a stone's throw of the Sphinx, is the fine Mena House Hotel, with all modern conveniences and even a tennis lawn. The same sort of thing may be noticed in other places, no doubt ; as in Rome, where a bit of the most ancient walls of Rome mingles with the railway lines close to the station. But Roman antiquities are modern compared with those of Egypt, and the contrast presented by the former is therefore the less striking and impressive. Another contrast of the same kind is presented by the habits and the customs of the

fellaheen. It has been well remarked that they retain in a singular degree the same customs as the ancient Egyptians as we know them from the pictures and hieroglyphs of the monuments. There is probably no other equally remarkable instance of persistence of custom, unless perhaps in China. The Egyptian fellahs, in many of their ways and customs, reproduce almost exactly their ancient prototypes. They use the same ploughs and the same shadoofs for raising water. They eat in the same way much the same sort of food. The dahabiyehs, or boats, that ply up and down the Nile are the same as of old, and descend laden with cargoes of the same earthenware water-jars. The fellahs of the country, therefore, contrast remarkably with their brethren of the towns. The latter have not been so conservative, and have gradually imbibed and adopted notions and customs of later times. The former still retain in primitive simplicity the habits of far-off days.

But these contrasts are material and on the surface. The anomalies and inconsistencies of Egypt lie hidden in the social and political structure. They are not blazoned about in the streets nor heralded from the house-tops ; on the contrary, they are only fully known to the patient investigator. But they are none the less interesting for all that. The international status of Egypt, for instance, is probably unique for complexity. The difficulty extends from the position of the khedive downwards. Egypt is nominally a province of the Turkish Empire, and until the year 1841 it was ruled by pashas in exactly the same way as the other provinces. The history of the change in its position is peculiar and instructive. In that year, Mohamed Ali, the then pasha of Egypt, induced the sultan to grant him a firman in virtue of which the government of the country was made hereditary in his family, but in other respects he ruled the country in exactly the same way as before. He was a strong and imperious man, and though in some ways he exceeded his

privileges, he retained the friendship of the sultan ; for though he might by force have repudiated the suzerainty of Turkey, he was too shrewd not to see that a declaration of Egyptian independence would almost certainly bring about the intervention of England or some other European power. Abbas Pasha and Said Pasha, the successors of Mohamed Ali, obtained from the sultan some further privileges, but their relationship to Turkey remained substantially the same. But with the accession of Ismail a new era began. He had all the ambition, but less of the talents and sagacity, of Mohamed Ali. He longed to play the rôle of a great man, and he went so far as to write a letter to the sultan asking for privileges which would in effect make him independent. He asked among other things to be invested with the title of asiz, which is the title given in the Koran to Joseph by Pharaoh, and which confers the powers described in Genesis c. 41, v. 40. These exaggerated demands of course met with great opposition, but in June, 1867, a new firman was issued which made a great change in the position of Egypt. The title of khedive was conferred upon Ismail with hereditary succession in his family according to European custom. The word khedive is of Persian origin and means minor sovereign, and therefore it conferred upon Ismail a position as nearly independent as could possibly be given him. But this was not all. In the same firman he obtained two important privileges : first, that of making special regulations for the internal condition of the country ; and secondly, that of concluding arrangements with foreign agents by which a modification could be obtained of the rights exercised by them over the administration of Egypt. So that in these ways the position of the khedive became very different from those of the other governors of Turkish provinces.

But Ismail's appetite for grandeur was not yet satiated. He insisted on playing the part of the Grand Seigneur. Coleridge once defined a gentleman as

a man with an indifference to money matters, and if this definition be accepted Ismail was as fine a gentleman as ever existed. Having obtained the great privileges already referred to by a lavish prodigality of baksheesh, he was not yet content, but contrived to get removed the restrictions that limited his borrowing powers. Having acted the great spendthrift, he naturally before long began to assume the part of the great borrower. But in this rôle he compassed the ruin of himself and his country. Many attempts were made to bolster him up. He even sold his shares in the Suez Canal to the English government, a transaction which has turned out as advantageous to ourselves as it must have been detrimental to the Egyptians. But it was all in vain, and in 1879 the sultan once more showed that he retained not merely the shadow but the substance of sovereignty by deposing Ismail and appointing his son Tewfik in his stead. The firman by which Tewfik was appointed confirmed him in the privileges of his father ; but some restrictions, which had previously existed, but from which Ismail had been freed, were again reimposed. The deposition of Ismail showed to the world that the sultan of Turkey still retained sovereign privileges over Egypt ; but none the less the relationship of the two countries is extremely complicated and anomalous, and it would be a matter of some difficulty to define what the international status of Egypt exactly is. And this difficulty has been lately brought prominently into notice by the death of Tewfik and the succession of his son Abbas II. Immediately upon the death of his father the new khedive assumed the reins of government, and a period of about two months elapsed before the firman arrived to confirm him in the succession. And yet during all that period the government of the country went on exactly as before. And it might have been safely predicted that it would have continued to go on in the same way if the arrival of the firman had been delayed to the Greek Ka-

lends. And yet, unimportant as the document may seem from this point of view, the sultan valued it so far as to endeavor by a subterfuge to incorporate into it modifications of the jurisdiction of the Egyptian government over the Sinai Peninsula; an underhand attempt which was frustrated by the vigilance of Lord Cromer. But all this portrays the glaring anomalies of the khedive's position. Though the sultan deposed his grandfather, the present khedive himself could continue to reign as if the sultan had nothing to do with the government of Egypt. And the position is complicated by the fact that the sultan is caliph of the Mahomedan world, and his relations to Egypt are as important from the religious point of view as they are from the political. For instance, the cadi, or the chief interpreter of religious law in Egypt, is appointed by the sultan. And the importance of the relation is emphasized by the fact that the sultan, in his capacity as caliph, is specially represented in Egypt by Ghazi Mouktar Pasha. It is apparently a small matter, but nevertheless the appointment of the special representative is said to have produced an excellent effect in calming the minds of the Egyptian people. But the anomalies of the Egyptian government are far from ending here. One of these is the institution known as the Caisse de la Dette Publique, and, as its origin is closely connected with the extravagances of Ismail, something may be conveniently said of it here. His princely expenditure, his vast projects for public works, and his colossal borrowings soon began to bear fruit, and Egypt was fast falling into bankruptcy. The corvée and a liberal application of the courbash could extract not a sou more from the unfortunate fellahs, and in 1876 the Egyptian government could no longer meet its engagements. The powers stepped in, and the Caisse de la Dette Publique was established, charged with the duty of receiving and applying for the interest and redemption of the debt certain revenues specially assigned. Now, it is the relationship of this Caisse de la

Dette Publique to the Egyptian government which forms one of the most anomalous points in the Egyptian administration. It is really a species of foreign interference in the government of the country, which, however necessary and wise, is extremely troublesome and embarrassing to the Egyptian government. For instance, the government is restricted, unless with an agreement with the majority of the commissioners of the Caisse, from effecting any changes in the taxes devoted to the debt which might diminish the revenue of those taxes. And, again, the administrative expenditure of the government is fixed at a certain figure, and any surplus which accrues after payment of interest on the debt, and after provision has been made for the administrative expenditure, is to be divided between the Egyptian treasury and the commissioners of the debt. The result of these restrictions is that the Egyptian government is much hampered in its attempts to alleviate taxation and carry out other reforms, for it continually comes into conflict with the Caisse de la Dette.

Another remarkable anomaly is presented by the administration of justice. There are no fewer than four separate jurisdictions in Egypt:—

(1) The mixed tribunals, which exercise jurisdiction over all civil cases in which foreigners are concerned.

The code of law adopted is the French code (with some modification), and with the view of giving confidence to all parties, the judges are selected from both the natives and from the different European nationalities. There are three languages recognized by the courts, namely, French, Italian, and Arabic.

(2) The various consular courts, which administer justice in criminal cases where the accused person is a foreigner. He can only be tried before his own consul.

(3) The native courts, which have jurisdiction in criminal and civil cases where only natives are concerned.

(4) The Mekhemeh, which decides

all questions connected with the personal status of natives according to the law of Islam.

It may well be questioned whether anywhere else such a number of coordinate jurisdictions can be found.

And lastly, as the greatest anomaly of all, is the British occupation. As Egypt stands at present, the occupation may be not unfairly described as the basis of a pyramid. Without it the Egyptian government would collapse. Although the sultan has sovereign rights in Egypt, although the khedive enjoys a large measure of independence, and although he has a complete machinery of native administrators at his disposal, yet the directing hand is really the hand of England in the background. She plays the part of a *deus ex machina*. And that is why the late khedive was so ideally good a ruler of Egypt. He has been commonly depreciated as a weak and colorless man ; but he had the good sense to see that the British occupation was the best thing for his country. He played to perfection the part of the "arch-mediocrity," to use Disraeli's description of Lord Liverpool. He sank his own individuality, and acted as a sort of political middleman between the English and the Egyptians. Though he achieved nothing great, he was one of those of whom it may be said : —

Multis ille bonis flebilis occidit.

And to maintain this British ascendancy force is necessary. It was said by Machiavelli that it is safer to be feared than loved. This is a proposition which is often more true than agreeable. And it is so particularly in the East. The present writer was informed by an official long resident in Egypt that the native will cringe and fawn though burning with the bitterest hate, so long as he can be made to fear. Indeed, Sir R. Burton sums it up when he says that the essence of Oriental discipline is personal respect based upon fear. And it is this respect based upon fear that the British army of occupation supplies. It is difficult to say what feelings the majority of the

native Egyptians have towards the British occupation. It is probable that they regard it with very mixed feelings. Kinglake very happily described the Turks as looking on the English as "a mysterious, unaccountable, uncomfortable work of God, which may have been sent for some good purpose to be revealed hereafter." The Egyptians, doubtless, think of the English much in the same way. They tolerate them as strong and just rulers, and recognize that it is to them they owe their present comparative prosperity. They are a docile and peaceable race, who care little who governs them, so long as that government is not too oppressive. They are slow to move, and possess a considerable stock of inertia. It is astonishing, for instance, to witness the persistency with which they cling to the old and laborious methods of manufacture, and resist the introduction of machinery. And they cannot be trusted to use it properly when they have got it. And no less astonishing is the apathy with which they permit their magnificent mosques to fall into ruinous decay. Something has been done lately to provide for their repair, but much is irreparable, and it is not too much to say that a moderate earthquake would level half Cairo to the ground. This is the spirit of the Egyptians, and it is, therefore, not surprising that they find the Englishman too active ; he is a sort of moral gadfly that goads them on and mars their dreamy fatalistic passivity.

Death is the end of life ; ah, why
Should life all labor be ?
Let us alone.

This is the prayer of the average Egyptian who knows little of the government of his country, and cares less, and would probably, therefore, not unwillingly see the British go, an eventuality which he would certainly repent at his leisure. During the period of the British occupation, the prosperity of Egypt has steadily gone on increasing. Bankruptcy has been averted ; a surplus in the revenue has been attained ; taxation has been alleviated,

and its incidence more equitably adjusted. Irrigation, upon which Egypt depends not merely for its prosperity, but for its very existence, has been improved and extended. The Barrage, for instance, which was practically useless, has, at a trifling cost, been made to perform its functions. Education has made remarkable advances, and is bringing with it the adoption of European customs. The amalgam thereby produced is not without its ludicrous side. The present writer saw a number of Egyptian youths in black coats, and with the inevitable scarlet tarboosh upon their heads, playing football in a temperature of a warm English summer's day. The use of the bastinado and the abuse of the corvée system have been abolished. The administration of criminal justice has been improved, though the first result has been to favor the escape of the guilty. Prisons, hospitals, and asylums are no longer a disgrace. Corruption, which appears to be the bane of nearly every administration from Canada to Turkey, has been almost entirely removed. The reign of privilege is over. The police force is very efficient, and the army has been transformed from nil into a most creditable body. Indeed, in no respect has the British occupation in Egypt worked greater wonders than in rebuilding the Egyptian army. The Egyptians are not a military people, and have no liking for military service. There is nothing of the swashbuckler or Bashi-Bazouk about them. The army was formerly so unpopular that they often maimed themselves outrageously in order to escape conscription. The relatives of the conscript mourned over him as one who had descended into the grave. But this is now all changed. The conscription (which is of a very mild character) is no longer regarded with horror. The Soudanese gladly volunteer; and it is impossible not to be struck with the smartness and military bearing of the men when parading through the streets of Cairo. They take part in sham fights and reviews in company with the British troops, and the present writer

was assured by a British officer that whatever they might turn out to be in real fighting, in sham fighting at least they showed remarkable dash and energy. And it may be added as a good omen for the future of the army that the new khedive is credited with the possession of much military ardor.

There are some minor points which may be usefully noted. The postal and telegraph service is so cheap and good that a comparison with some other and more powerful countries would be not altogether to the disadvantage of Egypt. The railway trains, though few in number, are comfortable and travel well. There is a good service of steamers on the Nile. The administration of justice is well cared for, at least in externals. In Cairo the mixed tribunal sits in a building containing rooms of a magnitude and splendor that are really palatial. The Palais de Justice, which occupies a prominent place in the great square at Alexandria, is a most noticeable building. From the point of view of society Cairo is during the winter season full of amusement and gaiety. There is a considerable resident population of military and civil officials, and from December to April it is thronged with visitors who come to enjoy an almost perfect climate. Balls and concerts are frequently given at the leading hotels; the opera is nightly to be heard at the theatre; musical at homes are given; polo matches, horse races, reviews, and regimental sports offer attractions to suit other tastes. For more serious minds the antiquities offer solid food for digestion. The Gizeh museum possesses inexhaustible attractions, and it is only marred by the want of a good catalogue. Alexandria, on the other hand, does not possess these attractions; but it contains a larger permanent European population, and it offers therefore social advantages, which, though less dazzling, are more solid and enduring. Many an Alexandrian would not exchange the homely domestic social intercourse of his own circle for all the brightness and gaiety of Cairo; and it may be added that the extravagances of visitors to Cairo have

made life there intolerably expensive to the ordinary European resident. House rent is excessively high, and no servant will give up the chances of baksheesh from the visitors except to receive wages on a princely scale. The Egyptian press represents all shades of opinion, and newspapers appear in French, Italian, Greek, and Arabic. The English language is but poorly represented in the *Egyptian Gazette*, which is published daily at Alexandria, and which consists of two sheets containing French and English versions of the same matter.

On the whole, it seems impossible for any disinterested person to deny that Egypt has made wonderful progress. Having regard to the fact of the utter disorganization that ensued upon the suppression of the revolt of Arabi, the advance that has been made is marvellous, and English administration has never achieved greater or more beneficial results.

C. B. ROYLANCE KENT.

From All The Year Round.
STOCKHOLM.

THE skating seems to give the keynote to outdoor life in Stockholm in winter. People skate here, or seem to, as naturally as they eat, sleep, and walk.

Not that there are the same facilities for long-distance skating in Sweden as in Holland. In the latter industrious land brooms and infinite energy are brought to bear upon the snow that tries to cover up the Hollander's beloved canals. Not so in Sweden. Resignation to the snow sets in in Scandinavia after November. Besides, Sweden is not permeated with waterways of the same kind as Holland's. The population, too, is smaller. It would not here, as in Holland, pay the tatterdemalions of the towns and villages to spend the hours of wintry daylight sweeping the snow from the frozen streams as fast as it falls. In Holland the average broom-man in December or January may hope in the

evening to take home quite a weighty handful of copper coins. In Sweden the enterprising person who tried to work in this way would get his nose numbed, and find his patience exhausted, ere he earned the worth of a dinner. We are farther north here. Nature, too, is sterner. She sets brooms at defiance.

Lake Malar offers all conveniences for a series of magnificent open-air rinks in winter. These conveniences are accepted.

It was most exhilarating to join the varied throng, any evening after seven o'clock, on one of these spacious swept and garnished areas by the side of the central island. They were here in their thousands; men, and women, and children. And band-stands in the middle of the areas gave facility for the music so loved by the Stockholmers, and electric lamps were slung round and about the enclosures.

The moon and the keen northern stars did their best also to make the scene memorable, while on the outskirts of the rinks were booths as at a fair, in which, as in more southern resorts, you might get cups of coffee for a halfpenny, or shoot at blown eggs dancing on jets of water.

From the king downwards, every one skates. His Majesty has not a private rink. Oh, no! That is not the way in Sweden. For a popular monarch like King Oscar no other course is possible except to skate with his people; and he does it on the rink behind the Museum. There are some charming maids of honor at the Swedish court—ask Prince Oscar, who married the fair Ebba Munck, if it is not so—and his Majesty does not think it beneath him to take them by the hand to share and double his pleasure.

Some of the Swedes skate superbly. We do not in England see many of their champions at our precarious contests in the Fen country. Our frosts cannot be relied upon sufficiently to make it aught but hazardous for a Stockholmer to attempt the journey hither in search of ice-laurels. But I much mistake if they would not run

either the Smarts of St. Ives, Hagen of Christiania, or the men of Friesland very close for pre-eminence if they gave themselves to the task. They are deft at figure-skating, too — contriving most of their work on the middle part of the skate, which is made slightly convex for the purpose.

Under such conditions of weather as may safely be predicted here in winter, it is natural that there should be rink rules just as there are moral rules of the pavement. Cigar-ends and dogs are, you learn from the notices, not to be endured on the ice. This is well. But the ordinary Swede, whether man or woman, boy or girl, can suffer some hard tumbles without complaining. Years ago in Sweden they had copper coins about ten inches square, and weighing six pounds *avoirdupois* — value two shillings and sixpence. A people who could appreciate nice little pieces of bullion of such a kind must have strong bones.

This prohibition of the presence of dogs on the ice is, however, suggestive. The Swedes are passionately fond of dogs. In the house where I lived there were four of them, from a gigantic nondescript to a toy terrier; and they all did pretty much as they pleased in the establishment. In the cafés, too, if you chance to fall agreeably asleep, you will also chance to be awakened sooner or later by the cold nose of a boarhound or a mastiff. The dear fellow is used to indiscriminate caresses and lumps of sugar, and he stands on no ceremony in his quest for both.

In time I should think they might breed dogs here of a size very valuable for their skins. Sweden is not such a land of game as some think it is, and so these omnipresent dogs cannot be for sporting purposes. Foxes, however, are still very plentiful. A hundred years ago, Acerbi the traveller told us how amused he was, between Stockholm and Grislehamn, "to see foxes here and there, standing or walking about on the highway without any apparent solicitude for their safety." Master Reynard is not hunted in state

here as with us; but he is trapped, shot, and slain in any possible manner for the sake of the government reward, and also for his pelt. In 1889, no fewer than thirteen thousand four hundred and forty-two foxes were registered as slain.

While I write I have before me the skin of one of these Swedish foxes. It is a beautiful thing in white and light brown. My host in Stockholm took me to the butcher's one day to choose it. I don't know, I'm sure, if any of Master Reynard's meat was on sale. Anyhow, there were several foxes' pelts, as well as stacks of reindeer skins, all frozen hard in the butcher's sheds. For a grand specimen of a reindeer skin I paid but five shillings and sixpence, while Master Reynard's natural blanket cost eight shillings. Between them the two things made a portly roll of fur. But ere getting them domiciled in England, I was considerably inconvenienced by the departure of the frost from their tissues. My luggage was not at all sweet lat-ter-ly.

Bears are nearly extinct in Sweden. You may see them stuffed in the furriers' shops in Stockholm, and that is about all. In 1889 only nineteen were recorded as killed between Malmö and Haparanda.

The Swedish ladies deserve a paragraph. They are nothing less than delightful, and to the stranger — and I believe also to their husbands — seem to be possessed of every domestic virtue. They are as gentle in their manners as they are vigorous and capable physically. Unlike the Southerners, they do not loudly proclaim the points upon which they may reasonably consider that they excel. When beautiful — and some of them are divinely so — they bear their beauty almost apologetically, with a blushing modesty, indeed, that, if an art, is one of the most alluring of arts. An anecdote told by Miss Bremer about Jenny Lind is so characteristic on this score that it must be given.

"I asked Jenny," said Miss Bremer, "of what she thought on a certain

night in the midst of her greatest success, and the simple reply was : 'I remembered that I had forgotten in the morning to sew a string on my cloak.' "

The same strain of simplicity appears in most Swedish ladies. They may be, as many are, excellently cultured, but they seem prone to remember nothing less than their personal talents, achievements, or physical graces.

Nor can this be ascribed to their lack of common sensibility. They are anything but cold-natured. They feel very deeply, and are prone to high thinking. They are as romantic as their German cousins, and not infrequently as vivacious as a Frenchwoman. Withal, they seem exceptionally endowed with the common sense in which we Britons are supposed to excel.

I should suppose that no women make better wives or are more amenable daughters.

"Why," my host said to me one day when I had left his drawing-room to smoke a cigar with him, "do you not marry a Swedish wife? You will not want to change her. She will try to make you happy, and I think she will succeed."

For my part, I have little doubt she would succeed. The Swedish women have large feet—scoffers have brought it against them as if it were a dreadful misfortune—but they have hearts in keeping with the size of their feet. Perhaps—I cannot tell how that may be—but perhaps their hearts are almost too large for their bodies, though these, too, are large. Certainly I have, in their moments of repose, noticed an expression of placid melancholy on the faces of many of these ladies. It is sometimes a calamity to be of a very affectionate disposition. I could fancy that the Swedish wife might be embarrassing to an ordinary cold-blooded male.

But there, I am only jesting. To Hans Andersen's enthusiastic apostrophe of Sweden, "Thou land of deep feeling, of heartfelt songs! home of the limpid streams!" I would add an appendix, "and shrine of perfect women!"

Sweden has long held the chief place in Europe for its number of illegitimate births. From one aspect this casts a stigma upon the country; but from another point of view this vice might almost be rated as a virtue. In many respects the country people are ingenuous as they are not elsewhere. Nature is more powerful in them than the restraints of a high state of civilization. This defect—we must assume that it is a defect—may be trusted to disappear in time. It is not now, for instance, the standing custom, as it was a few decades ago in Wermaland, for a guest to kiss the waitress at the inn when he had settled his bill, and given her a more solid gratuity also.

It is always instructive to wander from the heart of a great city into its suburbs and so into the adjacent country, as yet unspoiled by builders. You can form an idea of the habits of a people much better by looking at these suburban houses than from the close-packed towers of Babel which form the business quarters of most European capitals.

Take our own metropolitan suburbs. The long streets of uniform small houses tell of the rage for snug privacy and absolute dominion which possesses our middle and working classes. Flats are not yet much loved by us.

It is otherwise at Stockholm. The buildings remote from the middle island, almost tickled, indeed, by the swart pines on the granite rocks which hug Stockholm on all its sides, are little less tall than our city edifices. They are not all comely; but the charge of flimsiness cannot be brought against them. Red brick and granite are most in favor as materials, and between them these do wonders. They say in Stockholm that their city is already the most beautiful in the world. It looks as if they mean it to be also the best built.

Some think a great deal of the colossal pile of iron in the heart of the city, which bears the burden of the myriad telephone wires which bind house to house and tongue to tongue. To my mind it is an ugly object. The

stone building over which it rises with so considerable an air of menace is much better worth seeing. And herein you may find several score of smart young women earning their daily bread and chattering amazingly while they do the work of the Telephone Company.

It is, however, worth while to ascend this telephone tower if only to stare at a good deal of Stockholm beneath you. There is too much uniformity in the houses, but by no means too much in the level of the streets. From the north these latter run straight down to the water's edge of Lake Malar, or if not straight, with picturesque switch-back undulations. There is a difference of two or three hundred feet between their level at one end and the other. This must be very objectionable for the horses that draw the tram-cars, and especially in winter, and for their sake it may be hoped that Swedish enterprise will soon substitute electricity for horse-power as a motor force.

I strolled north from the National Museum one day when I had surfeited on pre-historic stone implements and—as it seemed—stone everything else. It was the dinner hour. For several minutes the streets were dense with clean-looking, brisk young women leaving their work. Then I passed a famous red church on a hill, in the churchyard of which a sexton was laboriously excavating a grave—they keep the ground fairly workable in winter with layers of dead leaves—and later the Observatory on a splendid site. Here the snow, which in the city was churned brown by traffic, began to assume its natural color. I was touching the extreme limit of Stockholm in one direction. But the hammer and clink of mechanics resounded loud, and before me were the newest of Stockholm's new buildings. From them I walked directly into the forest, as sombre and yet fascinating a study in black and white as one could see. It was a little depressing to see that here, as in America, the primeval pines are not sacred from advertisers.

There is something noble about these monotonous features of Sweden. Wherever there is neither lake, river, cultivated field, nor set plantation, nature seems determined to have pines, firs, or birches. The granite knolls among the trees add to their effect. But a builder could hardly find more intractable material than these environs of Stockholm. For the laboring classes of all kinds life in Sweden is a pretty severe test. After those who go down to the deep in ships, however, it must be harder for none than for those who have to transform irregular masses of tree-clad granite into "desirable residential blocks," five or six stories high.

I would have walked on into the forest from Stockholm's outer edge had not the snow been too difficult. As it was, I had to content myself with a long look into the shadowy depths, and then return.

Falling suddenly ravenous—the Swedish air in winter is very appetizing—I stepped into an ordinary working-man's "breakfast-house," as it was styled on its sign. Here I regaled myself with a bottle of beer, two sandwiches of smoked salmon, and two sandwiches of cheese. The fact is not in itself remarkable, but the cheapness of the refection seemed so to me. I paid fivepence for the meal, and enjoyed the warmth of a stove, the daily paper, and the society of two very respectful old women into the bargain.

Thus comforted, I felt in train to hob-a-nob with dead kings and queens and royal marshals, and so I hied me direct to the king's palace, and sought and obtained a guide for the royal burial-place in the Riddarholm—or Knight's Island—Church.

I need not describe my experiences here in detail; you can guess at them. My cicerone led me into a gorgeous modern chapel one minute, with staring marbles and gilding and elegant tombs in the midst thereof. A minute later he introduced me to the monuments of a different generation. Then we went down into dismal crypts packed with coffins in mouldering velvet cov-

ers, redolent of mortality. These faded chests of bones were all lavishly inscribed ; and high by the clerestory windows of the almost disused old church hung banners of knights and war trophies, dusty, and still, and faded, like everything else in this sombre building.

It was a place to shiver in. The crowning touch came with a glance into a recess chamber in the west end of the church, where divers nameless dead lay in coffins higgledy-piggledy — the latter rudely decorated with inelegant representations of death's-heads. There were cobwebs in this pretty nook, but not much daylight. We know that it is not all "cakes and ale" to be a crowned king. It seems, however, one of the least precious of the privileges of a monarch — this prescriptive right to lie above ground for centuries, the mock of mean vermin, and an excitable of either pitying or contemptuous comments from the descendants of the subjects whom by courtesy they are said to rule.

The old vikings went out of mortal existence with fine effect — at least, if the legends are to be believed. Probably in a few decades our great men will, as in the past, be consigned to funeral pyres when they have done their work. A worse thing might happen to them.

When I left the church I had the luck to clash with King Oscar himself in his royal sledge, speeding towards his huge white palace. His good people of Stockholm paid but little attention to him ; but there was certainly no mistrust or antipathy in the looks that were directed towards him. If you can fancy it, it was as if the citizens were glancing at the head of their respective households, in whom they felt confidence, and whom they saw too often to suffer any agitation in seeing once again. Gustavus Vasa, whose tomb is perhaps the best thing in the Riddarholm Church, was probably less happy in the full pride of his martial victories than Oscar the Second in the quiet love and confidence of his people. Oscar may well put up with the dis-

trust and habitual opposition of the Norwegians, so he continue to be revered as he is by the Swedes.

Stockholm satisfies the visitor. One does not expect such lusty stir as one finds in it. Its beauty, on the other hand, answers expectation.

This is so even in winter. The weather during January and February is not a succession of keen, bright days, without cloud. By no means. Occasionally the snow whirls hard and long about the streets, and tries to paint the telephone cables white. Lake Malar is then melancholy to behold, and may become deadly on closer acquaintance. The eye soon tires of falling snow, even as the body revolts against a too constant strife with this bitter northern wind. There seems no mercy, nothing, in fact, that is good in nature at such times here. One goes to and fro in the city, furred to the eyebrows, and tries to find partial relief in execration of the storm.

In the country it is, of course, worse. While I was in Stockholm a hardy professor of Upsala — he taught English there — started to cross the fjelds and frozen lakes into Norway. It was a journey for snowshoes. For a time all went well, but one day he separated from his guides for a while, bent on what he thought might prove a short cut. For him, however, it proved a short cut not to Norway but to eternity. He trod on some rotten ice in a lake, and fell into the water. His snowshoes, which had hitherto been an invaluable aid to him, now wrought his ruin. He could not extricate his feet. He hung on till his strength failed, then he gave up and died. There are more than the average of such chances of mortal calamity in Sweden in winter. The poets and painters of the North are true to nature in the sombre impressions their works leave, as a rule, upon the mind.

But what a rare stock of human beings must be the outcome of a brave fight with life under such conditions as prevail in the North ! No wonder the Scandinavians do so well in America. They carry bold hearts as well as

strong limbs with them to the West. These attributes are at least as important for the emigrant as subtle intellects.

Frithiof in the *Saga* said notable words when, in mighty consciousness of his own vigor he demanded:—

“What is high birth but strength?”

From *The Spectator*.
THE INSTINCT OF INDUSTRY IN ANIMALS.

A RECENT and interesting contribution to the sum of popular knowledge of animal instinct is M. Frederic Housay's work on “The Industries of Animals,” published in the “Contemporary Science Series” by Mr. Walter Scott. It is an ingenious attempt to bring man and animals into line on the common ground of their provision by industry of the necessities of life. The arts of collecting provisions, storing and preserving food, domesticating and managing flocks, and capturing slaves, are quite as well understood by animals and insects as by man in the earlier stages of his civilization, and show a curious analogy in their development in the case of the more backward among human communities. Ants of the same species both have, and have not, learnt to keep “cattle.” Lespès found a tribe of black ants which had a flock of “cows” which they milked daily. But he also discovered a nest of the same species which had no flocks. These he presented with some of the aphides used by their cow-keeping relations. The ants instantly attacked, killed, and ate them, behaving in exactly the same improvident manner as a tribe of Australian “black-fellows” when presented with a flock of sheep. A little-known and striking instance of foresight and industry exhibited by a bird is that of the Californian woodpecker. Like others of its kind, this bird is an insect-eater. Yet in view of the approach of winter, it prepares a store of food of a wholly different character, and arranges this with as much care as an epicure might devote to the storage of his wine in a

cellar. In the summer, the woodpecker lives on ants. For the winter it stores up acorns. To hold each acorn it hollows a small hole in a tree, into which the acorn is exactly fitted, and is ready to be split by the strong beak of the climbing woodpecker, though too tightly held to be stolen either by squirrels or other birds. A relation of this woodpecker inhabits the driest parts of Mexico, where during the droughts it must die of starvation, unless it made a store. To prevent this it selects the hollow stem of a species of aloe, the bore of which is just large enough to hold a nut. The woodpecker drills holes at intervals in the stem, and fills it from bottom to top with the nuts, the separate holes being apparently made for convenience of access to the column of nuts within. The intelligence which not only constructs a special storehouse, but teaches the woodpecker to lay by only the nuts which will keep, and not the insects which would decay, is perhaps the highest form of bird-reasoning which has yet been observed. The common ants of Italy—*inopiae metuens formica senectae* of the Romans—if not so strangely ingenious as the gardener-ants of the tropics, which prepare a particular soil on which to grow within their nests the fungus on which alone they feed, exhibits what is probably the most complex form of instinctive industry shown by any European animal. They store up oats and various kinds of grain, making hundreds of little rooms as granaries, of about the size of a watch. But grain lying in the ground naturally germinates. How the ants prevent this is not known. Probably by ventilation, as bees ventilate their hives by artificial draught. All that is certain is, that if the ants are removed the grain sprouts. When the ants wish to use the store, they allow the grains to germinate, until the chemical change takes place in the material which makes its fermenting juice food suitable for their digestion. They then arrest the process of change by destroying the sprout, and use the stock of glutinous sugar and starch so left as their main food in winter. M.

Houssay might have drawn his parallel between human and animal industries still closer, if he had referred to the curious partnership which modern observation has made possible between men and bees. By giving the bees a foundation of wax stamped with the shape of the cells, the bee-keeper saves the hive the time and trouble spent in this non-productive labor; and the purpose of the artificial aid so given is at once comprehended and turned to use by the otherwise stereotyped intelligence of the bee.

If we are ever to discover the origin and nature of instinct, it must be by the multiplication of facts and observations such as M. Houssay has endeavored to co-ordinate. At present it cannot be maintained that the last word has been said as to the origin of those astonishing creative acts by which the bee and his kind rival the mathematician and mechanician, or of the means by which the carrier-pigeon, and even four-footed domestic animals, find their way to their home across tracts of country absolutely new to their experience. The wonderful facts as to animal journeys across the sealess and almost riverless continent of Australia, increase the difficulty of finding a suitable explanation of instinct, which must necessarily cover this wholly unexplained power of local divination. So far as a recognized theory of the origin of instinct may be said to exist, there is very little to be added to the form in which it is presented in M. Houssay's treatise. He considers that by a careful comparison and classification of observed facts, it is possible to find in animals all the intermediate stages between a deliberate, reflective action, and an act that has become instinctive, and so invertebrate to the species that it has reacted on its body and produced new and special organs. "If an individual is led to reproduce the same series of actions, it contracts a *habit*; the repetition may be so frequent that the animal comes to accomplish it without knowing it; the brain no longer intervenes; the spinal cord or chain of nerves alone govern

this order of acts, to which has been given the name of *reflex actions*. This tendency to reflex action may be transmitted by heredity to the descendants, and then becomes an *instinct*." In the case of the bee, assuming this hypothesis to be the true one, the determination of the hexagonal form for its cells, which is just that which calculation shows to demand the least quantity of wax for the storage of the greatest quantity of honey, must originally have been due to trial and reflection. No one can doubt that there is a mind somewhere behind the astonishing finish and adaptation of bee-architecture and the social life of the hive. But of the process of development there exists no trace. We can only guess that it may have been so from the analogy of other cases of the formation of an instinct which have come within reach of human experience. But there are numbers of bees which make round honey-cells, like pitchers, and which, though presumably equally intelligent with the hive-bee, show no tendency to make their work more perfect mechanically. In the case of the moss-carding bee, the community may be supposed to be even more intelligent than the honey-bees; for the latter always seek a ready-made home, while the moss-carder builds one for itself. If instinct is to be regarded, not as a rudiment of intelligence, but the result of a series of reasoned acts, which by frequent repetition became habitual, then reflex, and finally instinctive, the part played by time in its production becomes of the first importance. It does not matter whether the lives of the creatures which at present perform acts by instinct are long or short, if we grant the power of hereditary transmission demanded by the theory. The results of yearly experiments by successive generations of bees or wasps, most of which die at the end of twelve months, may survive in the consciousness of the race equally with the longer experiences of man in his generations. Looking at present facts — that in the case of the queen-wasp, for instance, the sole survivor does transmit to her

offspring the whole permanent instinct of architecture and social polity of her race—the power of heredity cannot be denied, because the facts do not admit of any other explanation, except on the hypothesis of the existence of some additional sense which, owing to the limitation of our own, we could by no possible means comprehend. The growth of instinct, if the theory of its development given above is correct, should be a process of abnormal length, and it would almost follow that the antiquity of species could be estimated from the degree of perfection in which instinct is exhibited. The difference of structure and diversity of needs in different animals, in some so simple and in others so complex, need not weaken this conclusion, if we only compare those in which the order of daily life is somewhat similar. The life-history of the hive-bee would seem to demand a far longer period for its complex instinct to become stereotyped than the life-history of the solitary species ; and man, with his few forms of instinctive action and reliance on individual intelligence, would be assigned a place among the latest developments of nature. Our knowledge of the facts of instinct is as yet too ill-assorted for the construction of more than a working hypothesis as to its origin ; and until the question of the inheritance of acquired characteristics is more completely answered than it is at present, the whole structure hangs on a doubtful link. But there is one point on which the theory of instinct which M. Houssay reproduces is eminently satisfactory, though he does not claim it as an argument for its value. It accounts for the uniformity and subordination of individuals in the life of the social animals and social insects, which is almost inexplicable on any other hypothesis. That thousands of beings so intelligent as the bee can live together and exercise an intelligence which is used solely for the good of the community, and never for the personal advantage or aggrandizement of an individual, transcends reason, as we understand it. Yet it is just possible to conceive a

human community in which the system of caste might become so stereotyped as to eliminate the initial difference between man and man in each class, and produce uniform types of workers, soldiers, and the like. But in such a case, what is instinct but a degradation of intelligence, producing perhaps a higher level of work but a lower type of mind.

From The Spectator.

HENRY G. WREFORD.

MR. HENRY G. WREFORD, for fifty years the *Times* correspondent in southern Italy, deserves something more than a passing word of comment. He was one of the few genuine heroes of the pen, the men who reflect lustre on the most ephemeral and least honored of all serious professions. There have been and are among special correspondents plenty of brave men, who have behaved like volunteers in a forlorn hope, and have faced death in the performance of duty with a daring uninspired by the hope of honors or by that feeling of fidelity to a flag which, with so many otherwise commonplace natures, has operated like a religion ; but Mr. Wreford had a courage which was in some respects beyond them all. He had contracted, early in his service with the *Times*, a deep pity for the people of Naples, who repaid him at first with incessant insult, and a deep horror of the foul Bourbon court, that “negation of God erected into a system,” as Mr. Gladstone described it, which at that time tyrannized over their destinies. Most Englishmen, Mr. Gladstone perhaps excepted, have forgotten it ; but there has never existed elsewhere in Europe anything like this government, which defended itself with Swiss mercenaries, used as instruments the wretched *lazzaroni* of the capital, and ruled the respectable classes like a pasha in Algiers or Tunis, punishing the slightest opposition by imprisonment, often lifelong, in dungeons which were, without aid from rhetoric, describable as mere wells. Unless an

ambassador, no man's life or liberty was safe if he were denounced by one of a myriad spies ; and for years even the pleasure-lovers of Europe avoided the delicious kingdom like a lazaretto. Mr. Wreford set himself to bring European opinion to bear on this den of horrors, and for seventeen years he persevered unflinchingly in his work. He was recognized after a little while as one of the most "dangerous" of opponents, as a man who was turning all Europe against the king's government ; and the devotees of that horrible court swore to have their revenge. He was shadowed perpetually by spies ; men suspected of sending information to him were treated like criminals ; he was menaced with ruin by expulsion ; and the populace were excited against him till it was unsafe for him to enter Naples. Darker threats, too, were levelled against him by the zealots of the court party. He himself showed the writer one proof positive that men who could not have been punished had proposed his assassination ; that two plans at least for kidnapping him had been matured ; and that on one occasion a plot for drowning him had been within an ace of success. During one gloomy six months he held his life, as he believed, only from hour to hour, and owed it, as he thought, mainly to the protection of the British minister, and one or two persons in a foreign embassy. In reality he owed it, as after hearing his narrative the writer could not but recognize, to King Ferdinand, who was not the vulgar tyrant Englishmen believed, but a cool, shrewd cynic, who despised his subjects and most of his own agents, who was full of courage — a quality in him which Mr. Gladstone once recognized publicly after his death — and who was so completely king of the old Bourbon type, that he would not stoop to crime against a poor devil of a foreign correspondent who owed him no allegiance. Had Mr.

Wreford been a Neapolitan, he would have died in torture. The king, however, who was by far the best-informed man in his dominions, understood perfectly well that the kingdom of the Two Sicilies alone among European kingdoms lay at the mercy of the British fleet ; that two men-of-war would cut him off from Sicily, and one call Naples into insurrection ; that he was coldly disliked by the very powers which protected him ; and that, if Switzerland recalled her children, he would be left face to face with subjects who might adulate but could not defend him. He wanted no duel to the death with either the *Times* or the British Parliament, and as he was a dreaded master, Mr. Wreford just escaped. During the whole of this period, half an ordinary generation, Mr. Wreford, though by no means a man of the soldier type, but rather a retiring and sensitive civilian, with a habit of depression — he had been, we rather think, at one time a Nonconformist minister — held unwaveringly on his way, never concealing any truth he knew, and striking sometimes fearful blows at a system which latterly he came to hate almost beyond reason. His courage may have been of the passive type, but he faced death, or worse, unfalteringly through years of feeble health, for the sake of men who gave him nothing back, not even their applause. He behaved, in fact, for years as one of the bravest of mankind, and when at last the evil despotism fell in a night as if struck down by the God it had despised, the ease of its fall was in great part due to the horror of it which he had patiently spread through Europe, and which had at last reacted on the monarchy itself. He was a plain man, though a cultivated one, simple in thought and in the expression of his thought, with perhaps a faint vanity in his own skill in gathering information ; but he did a knight's service for Italy and for the world.

